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Statewide Angling Pressure

Mail Survey

1995

Prepared by:

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Montana Department of Fish, Wildlife and Parks

May, 1997

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INTRODUCTION

The Montana Department of Fish, Wildlife and Parks has conducted statewide angling mail surveys in the past. Bishop (1959, 1960 & 1961) conducted the first recorded mail survey of fishing pressure on a statewide basis for Montana. He found that residents fished 1,323,129 angler days, nonresident season license holders fished 60,632 angler days, and nonresident 6-day permit holders fished 40,933 angler days for the 1958 season. In 1959 residents fished 1,345,000 angler days, nonresident season license holders fished 54,000 angler days, and nonresident 6-day permit holders fished 121,000 angler days. In 1960 the third annual survey was conducted and residents fished 1,356,000 angler days, nonresident season license holders fished 53,000 angler days, and nonresident 7-day permit holders fished 112,000 angler days.

In 1968 the statewide angling pressure mail survey was again initiated by Holton (1970). He found residents had fished 1,519,126 angler days, nonresident season license holders fished 69,653 angler days, and nonresident 6-day permit holders fished 161,772 angler days. Holton (1971) conducted another statewide survey for the 1969 license year. No results were reported because it was felt they were too high due to sampling problems.

In 1975, Gaffney (unpublished data) conducted a statewide survey of angling pressure by mail. He found residents fished a total of 2,314,030 angler days and nonresidents 508,034 angler days for a statewide total of 2,822,093 angler days. An attempt was made to continue that statewide survey in 1976 using the 1975 mailing lists. This did not provide adequate samples for nonresidents, so only resident pressure was obtained.

Holton (1974) stated,

> "The lack of up-to-date fishing pressure information on individual waters has been a handicap in fisheries management. It is recommended that (the) evaluation of (a) mail survey to fill this need be accomplished as soon as feasible."

The surveys were started again in 1982 and run for four consecutive years (McFarland, 1989). The statewide angling pressure ranged from 2,197,402 to 2,723,713 angler days. In 1986 the surveys were again canceled for lack of funding.

In 1989, the Montana Legislature approved funding for an "Enhanced Survey of Angling Pressure". The funding was such that the survey was to be conducted every other year. In March, 1989, the statewide angling use mail survey was again re-initiated. The statewide angling pressure was estimated at 2,336,085 angler days (McFarland, 1991). In 1991 and 1993, the statewide use was estimated at 2,300,880 and 2,578,495 angler days respectively (McFarland & Hughes, 1993 & 1995).

METHODS

The 1995 statewide angling mail pressure survey began in March of 1995 and was conducted for the license year ending in February, 1996.

Samples were drawn from the Department's Sportsman's Database. There are six types of fishing licenses available to residents: a season license, a combo license, a sportsman's license, a "senior" license, a "youth" license and a disabled license. A season license is required for those resident anglers between the ages of 15 and 61 inclusive (a conservation license is required as a prerequisite to purchasing any fishing license). Residents between the ages of 12 and 14 inclusive, are required to purchase a conservation license to fish. These were determined by using the date of birth on the Conservation license and were classified as "youth" license holders. The combo license combines a season fishing license and a conservation license. A sportsman's license provides a deer "A" tag, elk tag, bear tag, conservation license, a game bird stamp and a fishing license. Residents 62 years of age and older are entitled to fish by purchasing a conservation license. These were determined by using the date of birth on the Conservation license and were classified as "senior" license holders. Residents who are certified as permanently and substantially disabled may purchase a "Disabled Persons Conservation License". The "senior", "youth", and "disabled" licenses were combined for the "SYD" population.

Nonresidents 15 years of age and older must have a valid Montana fishing license to fish. Those nonresidents under the age of 15 may fish by buying a nonresident license or by being in the company of an adult with a valid Montana fishing license. If the latter, the combined limit may not exceed the limit for one adult. Nonresidents have four types of licenses available for fishing in Montana; a combo license, a seasonal license, a two-day permit, and the big game combo. A nonresident conservation license is required as a prerequisite to purchasing any nonresident fishing license. The combo license combines a nonresident conservation license and seasonal fishing license. The big game license includes a conservation license, an elk tag, a deer "A" tag, a black bear tag, a fishing license and an upland game bird license. A two-day permit enables the nonresident angler to fish for two consecutive days of their choice. Anglers may purchase as many two-day permits as they want.

A computer program was written in PASCAL to create three populations of anglers from which to draw samples. A resident population, a nonresident population and a "SYD" population were created each month. The resident population comprised the following license types: combo, season, and sportsman. The nonresident population comprised the following license types: nonresident combo and nonresident season. The "SYD" population consisted of the following license types: senior (62 years of age

and older), youth (between 12 and 14 years of age inclusive), and disabled.

Gaffney (1982) sampled the 17,000 nonresident big game license holders in 1980 and found that 29.6% had fished while in Montana. They averaged 3.9 days fishing per person which would account for nearly 20,000 man days of use. This is less than 1% of the total pressure in the state. Due to budgetary constraints and the small amount of pressure, the big game license holders were not included in the nonresident sampling for 1995.

A PASCAL computer program was used to pull a random sample from each population. The amount pulled from each population was proportionally allocated to the angling pressure each population exerted from previous surveys. This proportion remained constant throughout all sampling periods.

The sample from each population was copied into a dBASE format structure and wave information and sequential serial numbers added. A dBASE computer program was written to affix names and address as well as bar codes directly to each questionnaire. Starting with wave 7, this file was then taken to the Montana State University (MSU) post office and ran through their computer program to check for valid addresses and zip codes. Starting with wave 8, the invalid list was then edited by hand to check for small town addresses that may have been marked as invalid but are deliverable. The questionnaire, and a return envelope were stuffed into window envelopes and mailed (see appendix for examples). All questionnaires were mailed bulk rate.

Sampling was done on a stratified basis. Strata (waves) were monthly for the resident, seasonal nonresident, and SYD populations (Table 1).

Nonresident 2-day license holders could not be sampled directly, so nonresident conservation license holders were sampled and questions asked to ascertain if they were valid 2-day permit holders. These questionnaires were sent out at the beginning of March since less than 1% (1,163) of the 2-day permits are remitted after this date. The questionnaire asked about their fishing in Montana for the entire license year.

Authorized private dealers sell fishing licenses throughout the state. In addition, the seven regional headquarters and the Helena office sell licenses. All licenses are to be remitted to the licensing bureau in Helena by the 10th of the following month of the sale. Each license is a five-part form. The original remains with the angler, the first copy was sent to Bozeman for use in the surveys, the second copy was retained in Helena, the third copy was sent to the area warden and the fourth copy was retained by the license dealer. The licenses usually arrived in Bozeman one week after they were remitted to Helena. Licenses are then keyed and entered into the Sportsman's Database. Samples for the previous month were then pulled and the questionnaires mailed around the 20th of the following month. For example, samples for August would be pulled and sent around the 20th of September.

Table 1. Period of time covered for waves for the 1995 statewide angling survey.

Wave	Time Period covered
1	March '95
2	April
3	May
4	June
5	July
6	August
7	September
8	October
9	November
10	December
11	January '96
12	February
99	Nonresident 2-day

Past surveys indicated that residents provide approximately 80% of the pressure (Gaffney 1975, McFarland 1989, McFarland 1991, McFarland 1993), therefore sampling was done on a 80/20 split between residents and nonresidents (i.e. proportional allocation). Actual numbers sent varied slightly from wave to wave (Table 2). Proportional allocation was used for determining sample sizes from wave to wave. For the "summer" waves 10,000 residents and nonresidents were sampled. In the "winter" the rate dropped to 5,000 residents and nonresidents. Since waves 1 and 2 had fewer license holders from which to sample, these two waves were sampled at a less intense level.

Two survey questionnaires were used, one for residents and season nonresidents and the other for 2-day nonresidents. The resident/nonresident questionnaire (see appendix A for examples), included questions on: what water was fished; nearest landmark, town, or county; section of stream or river fished (taken from map on back of questionnaire); date fishing occurred; number of days fished; whether the water selected was their second choice because their first choice had whirling disease; if the primary purpose of their trip was to fish; and, the round trip distance in miles of their fishing trip. The 2-day questionnaire was the same basic design but included questions to ascertain if the respondent was a valid 2-day fishing permit holder and how many permits they bought. The survey also asked about their entire year of fishing versus a single month.

To ease the sorting process different colored forms were used for each wave and also for initial and remail mailings.

Table 2. Number of questionnaires sent for each wave by residency for 1995

Wave	Mailed Res	Nonres	Useable Res	Nonres	Returns Res	Nonres
1	325	26	302	25	212	20
2	4627	361	4279	325	2646	204
3	9263	727	8504	641	5014	362
4	9267	728	8348	616	4829	363
5	9266	727	8231	619	4742	402
6	9259	730	8348	641	4686	313
7	9265	725	7481	555	4551	361
8	9253	718	8212	624	5370	446
9	4632	362	4090	315	2772	240
10	4633	360	4057	309	2684	230
11	4633	359	3967	271	2632	184
12	4633	365	4114	309	2590	215
99		10000		9043		4657

Remail questionnaires were mailed to those individuals who had not yet responded, from two to four weeks after the initial mailing. Returns for each wave were monitored and when they slowed down to a few each day the remail was sent. Included in the remail was an explanation, (see appendix A for examples), a duplicate questionnaire and a return envelope. Returns were grouped and counted according to type of license, wave and mailing (initial or remail).

Phone surveys were made to resident anglers license holders who had not responded in either the initial or remail survey. The phoning was done for all waves. Because of budgetary constraints, nonresident 2-day, non-resident season anglers and resident anglers in waves 11 and 12 were not phoned. Data from this survey was used to determine if a non-response bias existed and to make adjustments if necessary. The formula used was:

$$A_{ij}=R_{ij}+\frac{P_{ij}}{M_{ij}}\left[1-R_{ij}\right]$$

where A_{ij} = Adjustment factor for non-response for the ith wave and jth residency

R_{ij} = Response rate for mail survey for ith wave and jth residency (response rate is the total number of returns divided by the total number of surveys mailed out minus the number of

undeliverable surveys)

P_{ij} = Phone rate of days fished per respondent for ith wave and jth residency

M_{ij} = Mail rate of days fished per respondent for ith wave and jth residency

Since no significant difference (P=.15, paired t-test=1.686, d.f.=7) was found in fishing rates between mail and phone respondents the adjustment factors were all set to 1.0.

After all questionnaires were received those that had fished in Montana during the period in question were separated from those who said "no". The "yes" respondents were then hand coded and assigned a numeric code for each water fished. They were visually edited for accuracy and completeness.

All data were then keypunched with each day of fishing recorded as a single record. Edits were run to correct invalid water codes. FORTRAN computer programs were written to analyze the data and calculate fishing pressure and standard errors.

Estimates were made for individual waters based upon the formula:

$$P_j = \sum_{i=1}^{n} \left| \frac{E_{ij} * D_{ij}}{R_{ij}} \right| * A_{ij}$$

where P_j = Pressure for an individual water by the jth residency

E_{ij} = Number of eligible anglers for the ith wave and jth residency

D_{ij} = Days fished that particular water for the ith wave and jth wave

R_{ij} = Number of respondents from the survey for the ith wave and jth residency

A_{ij} = Adjustment factor for non-response for the ith wave and jth residency

n = number of waves in the estimate year or season
j = number of residency types (resident, nonresident, or total)

the variance was then calculated using

$$VAR(P_j) = \sum_{i=1}^{n} \left| \frac{E_{ij}^2 * VAR(D_{ij})}{R_{ij}} \right| * A_{ij}^2$$

Where P_j, E_{ij}, R_{ij}, D_{ij}, and A_{ij} are the save as above.

Pressure estimates between waves and residency were assumed to be independent so variances were summed to obtain total variances. The square root of the variance was taken and this number was reported as the error for fishing pressure.

RESULTS

1995 ANNUAL

Licensed anglers fishing on Montana waters exerted 2,504,855 angler days of pressure for the 1995 license year. Residents accounted for 1,865,646 angler days (74.5%) and nonresidents made up the remaining 639,209 angler days (25.5%). Individual water estimates sorted alphabetically are given in a separate report "Montana Statewide Angling Pressure 1995".

The pressure distributed between Fish, Wildlife and Parks regions (Figure 1) emphasizes the cold water fishery (Chart 1). Region 3 received the most angling pressure with 672,513 angler days (26.8%). Regions 4 was next in order with 501,614 angler days (20.0%). Regions 1 and 2 were close with 382,265 (15.3%) and 385,991 (15.4%) angler days respectively. Region 5 had 305,529 angler days (12.2%). The warm water regions of 6 and 7 were the lowest in pressure with 153,415 (6.1%) and 87,909 (3.5%) angler days respectively.

Angling in Montana in 1995 was directed toward trout. Salmonid waters accounted for 87.7% (2,197,794 angler days) of the statewide pressure while nonsalmonid waters accounted for 9.6% (239,436 angler days) of the pressure and undesignated waters accounted for 2.7% (67,625 angler days) of the pressure (Chart 2). An undesignated water is one that did not have a unique code to assign, and therefore water type could not be determined. This water was assigned a generic code based on drainage and county so angling pressure could be estimated.

Within salmonid waters, the streams received more pressure than the lakes, 57.7% versus 42.3%. The nonsalmonid lakes received more pressure than the nonsalmonid streams, 60.4% versus 39.6% respectively.

Salmonid angling dominated the pressure in regions 1, 2, 3, 4, and 5. Regions 6 and 7 were predominately nonsalmonid angling (Chart 3, Table 4).

Table 4. Angling pressure in angler days by region by water type for the 1995 angling year.

TOTAL PRESSURE ESTIMATES THROUGH SUMMATION

REG	WATER TYPE	TOTALS PRESSURE	TOTALS TRIPS	RESIDENTS PRESSURE	RESIDENTS TRIPS	NON-RESIDENTS PRESSURE	NON-RESIDENTS TRIPS
1							
	SALMONID STREAM	141387	3463	104151	2539	37236	924
	SALMONID LAKE	219486	5511	172458	4228	47028	1283
	NONSALMONID STREAM	0	0	0	0	0	0
	NONSALMONID LAKE	11515	308	10939	293	576	15
	UNDESIG STRM MGMT	3135	79	1865	50	1270	29
	UNDESIG LAKE MGMT	6742	169	5660	142	1082	27
	REGIONAL PRESSURE ESTIMATES:	382265	9530	295073	7252	87192	2278
2							
	SALMONID STREAM	280343	6826	188013	4582	92330	2244
	SALMONID LAKE	99927	2287	83133	1918	16794	369
	NONSALMONID STREAM	0	0	0	0	0	0
	NONSALMONID LAKE	0	0	0	0	0	0
	UNDESIG STRM MGMT	2187	64	924	24	1263	40
	UNDESIG LAKE MGMT	3534	85	2832	70	702	15
	REGIONAL PRESSURE ESTIMATES:	385991	9262	274902	6594	111089	2668
3							
	SALMONID STREAM	430369	10785	235680	5845	194689	4940
	SALMONID LAKE	236243	5668	174881	4146	61362	1522
	NONSALMONID STREAM	0	0	0	0	0	0
	NONSALMONID LAKE	0	0	0	0	0	0
	UNDESIG STRM MGMT	3451	86	1891	48	1560	38
	UNDESIG LAKE MGMT	2450	59	1985	44	465	15
	REGIONAL PRESSURE ESTIMATES:	672513	16598	414437	10083	258076	6515
4							
	SALMONID STREAM	197806	4732	156981	3736	40825	996
	SALMONID LAKE	247381	6125	223793	5555	23588	570
	NONSALMONID STREAM	20000	499	18030	453	1970	46
	NONSALMONID LAKE	21545	511	21051	498	494	13
	UNDESIG STRM MGMT	1485	41	1299	35	186	6
	UNDESIG LAKE MGMT	13397	318	12486	293	911	25
	REGIONAL PRESSURE ESTIMATES:	501614	12226	433640	10570	67974	1656
5							
	SALMONID STREAM	207304	5235	139935	3433	67369	1802
	SALMONID LAKE	79572	1948	66743	1625	12829	323
	NONSALMONID STREAM	9604	248	9014	229	590	19
	NONSALMONID LAKE	1840	48	1809	47	31	1
	UNDESIG STRM MGMT	856	26	340	9	516	17
	UNDESIG LAKE MGMT	6353	162	4620	108	1733	54
	REGIONAL PRESSURE ESTIMATES:	305529	7667	222461	5451	83068	2216

Table 4. Angling pressure in angler days by region by water type for the 1995 angling year (continued).

REG	WATER TYPE	TOTALS PRESSURE	TOTALS TRIPS	RESIDENTS PRESSURE	RESIDENTS TRIPS	NON-RESIDENTS PRESSURE	NON-RESIDENTS TRIPS
6							
	SALMONID STREAM	7264	176	7153	173	111	3
	SALMONID LAKE	37399	984	37244	979	155	5
	NONSALMONID STREAM	26855	743	26008	723	847	20
	NONSALMONID LAKE	76839	1887	69206	1698	7633	189
	UNDESIG STRM MGMT	855	25	855	25	0	0
	UNDESIG LAKE MGMT	4203	102	3977	95	226	7
	REGIONAL PRESSURE ESTIMATES:	153415	3917	144443	3693	8972	224
7							
	SALMONID STREAM	4497	130	2993	86	1504	44
	SALMONID LAKE	8816	203	8493	193	323	10
	NONSALMONID STREAM	38433	1037	37314	1001	1119	36
	NONSALMONID LAKE	32805	890	22968	627	9837	263
	UNDESIG STRM MGMT	717	20	717	20	0	0
	UNDESIG LAKE MGMT	2641	71	2579	69	62	2
	REGIONAL PRESSURE ESTIMATES:	87909	2351	75064	1996	12845	355
TOTAL							
	SALMONID STREAM	1268970	31347	834906	20394	434064	10953
	SALMONID LAKE	928824	22726	766745	18644	162079	4082
	NONSALMONID STREAM	94892	2527	90366	2406	4526	121
	NONSALMONID LAKE	144544	3644	125973	3163	18571	481
	UNDESIG STRM MGMT	28305	774	13517	351	14788	423
	UNDESIG LAKE MGMT	39320	966	34139	821	5181	145
	STATEWIDE PRESSURE ESTIMATES:	2504855	61984	1865646	45779	639209	16205

Region 3 had the largest angling pressure for salmonid streams (430,369 angler days) while region 4 had the largest angling pressure for salmonid lakes (247,381 angler days). Nonsalmonid stream fishing pressure was largest in region 7 (38,433 angler days), while the nonsalmonid lake angling pressure was largest in region 6 (76,839 angling days).

The majority of angling pressure in 1995 in all regions was exerted by residents (Chart 4). The percent of angling pressure by residents for each region was: region 1 - 77.2%, region 2 - 71.2%, region 3 - 61.6%, region 4 - 86.4%, region 5 - 72.8%, region 6 - 94.2%, and region 7 - 85.4%.

August (wave 6) was, overall, the peak fishing period, while November (wave 9) was the least fished period during the year (Table 5). Both residents and nonresident season license holders preferred to fish during August while residents fished the least in November and nonresident season license holders fished the least in December (wave 10). The majority of the nonresident pressure (50.7%) was exerted by the 2-day license holders. Since these anglers were sampled once at the end of the license year the pressure could not be classified into waves although it can logically be assigned to the summer season.

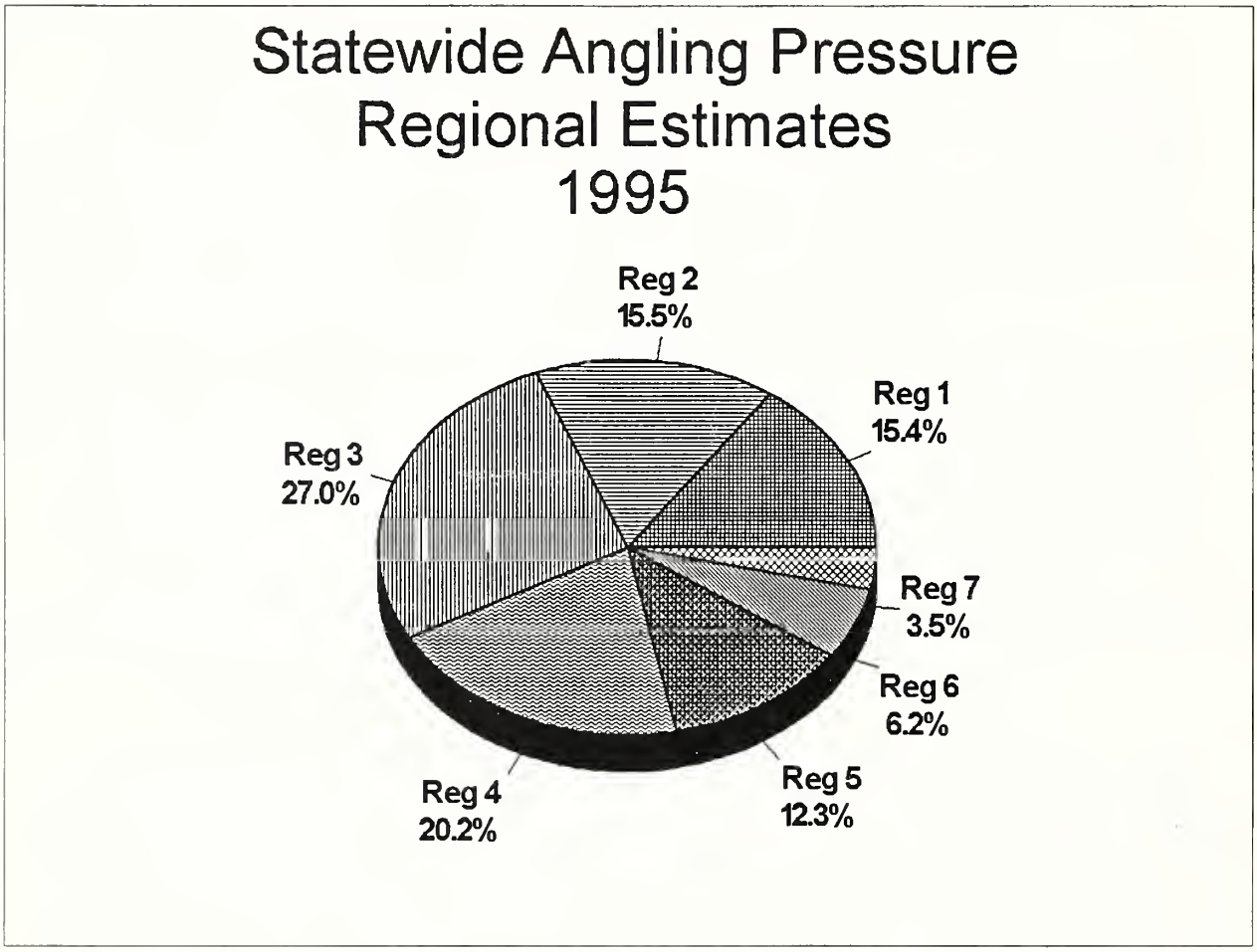

Chart 1. Percent of angling pressure by region for 1995.

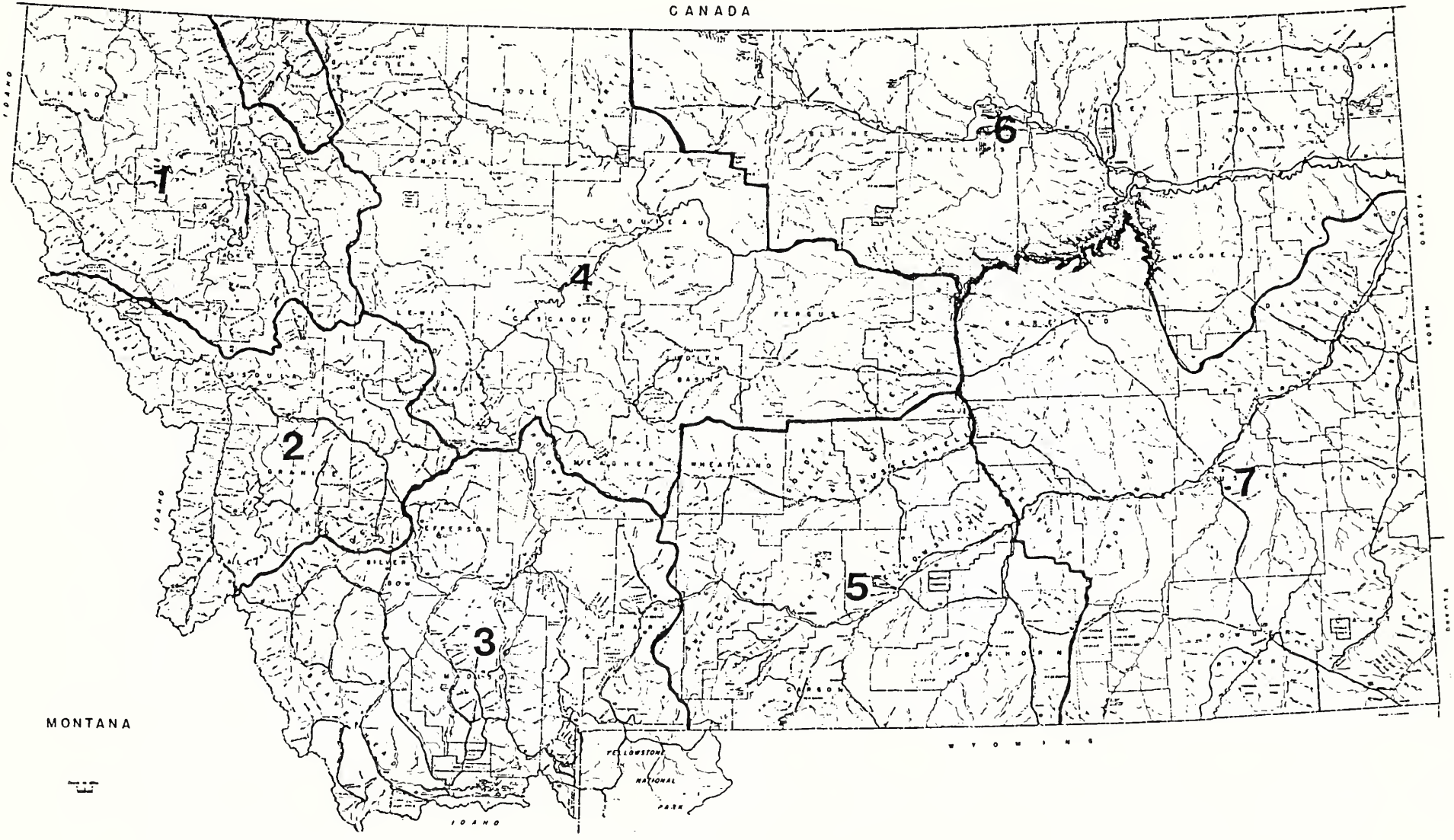

Figure 1. Map of the State of Montana showing the Department of Fish, Wildlife & Parks Regional boundaries.

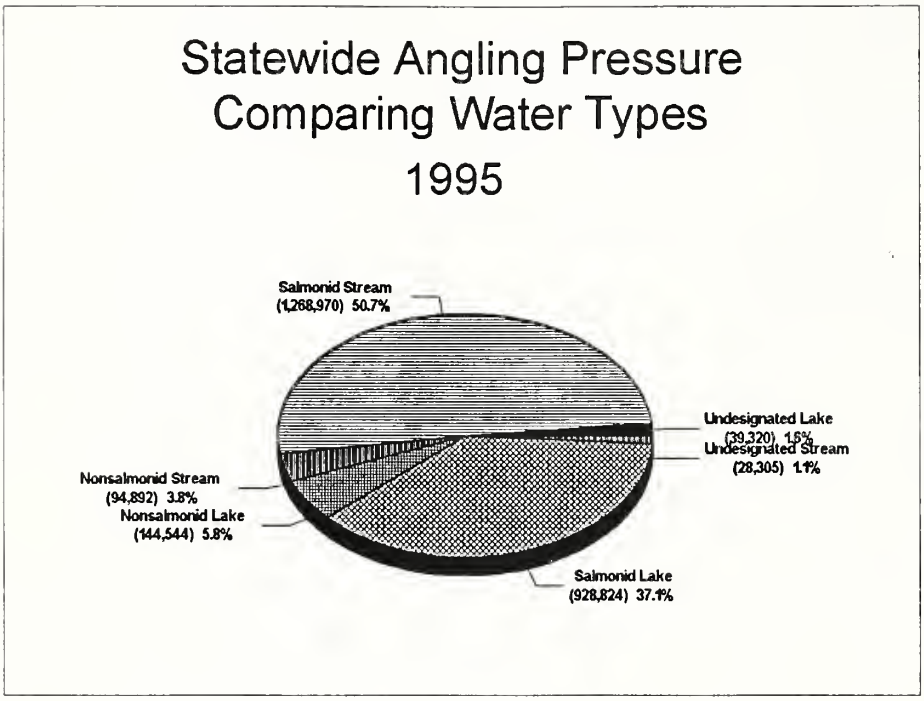

Chart 2. Angling Pressure and percentages by type of water for 1995.

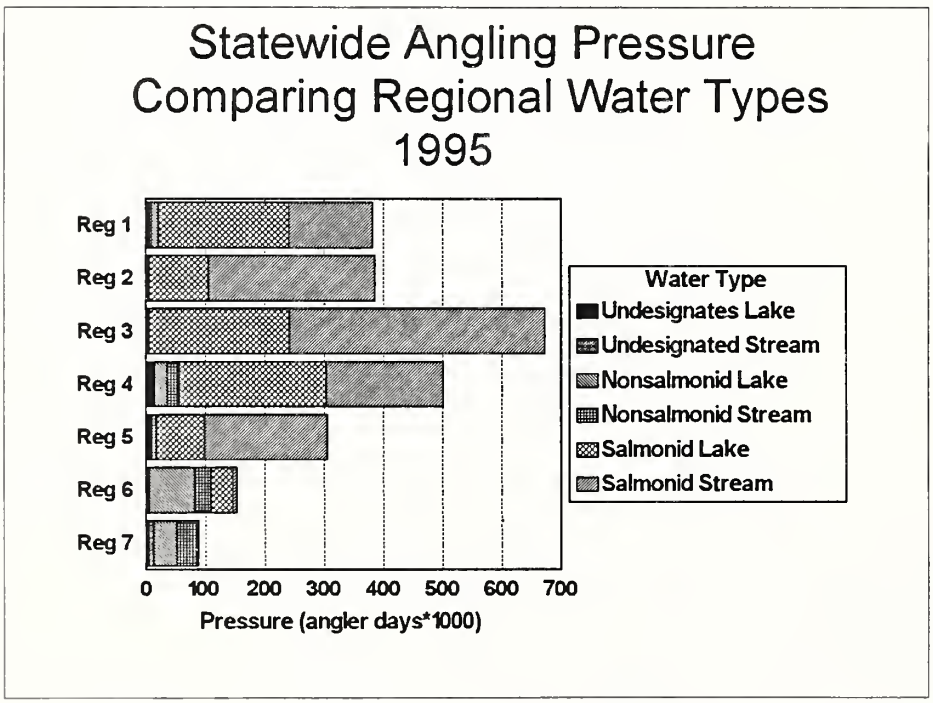

Chart 3. Angling pressure by region by water type for 1995.

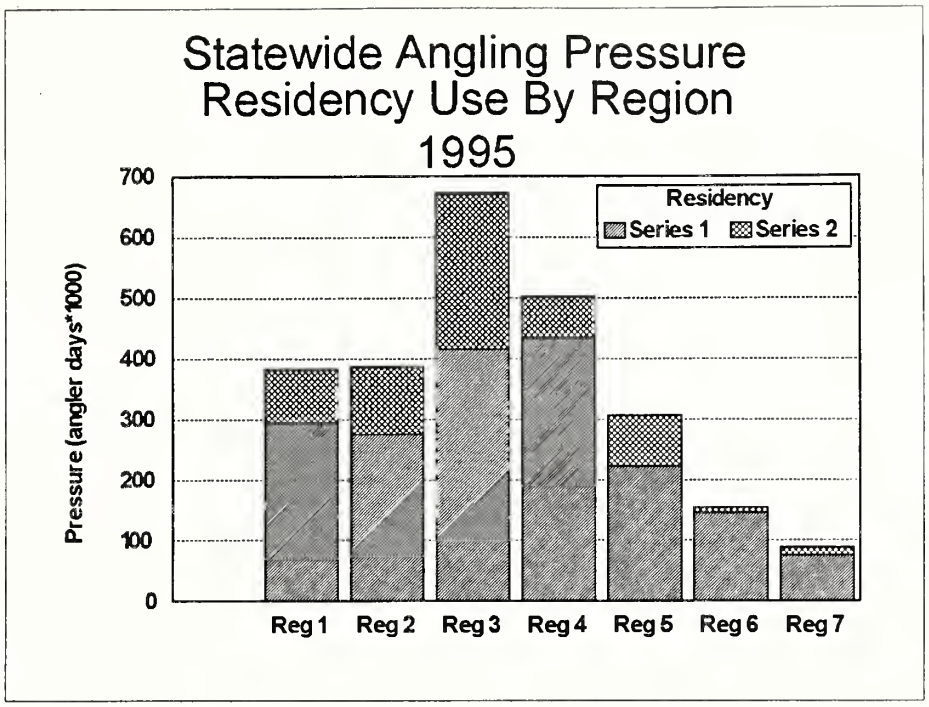

Chart 4. Angling pressure by region by residency for 1995.

Table 5. Pressure in angler days by wave for the 1993 survey year.

WAVE	TOTAL	RESIDENT	NONRESIDENT
1	50,766	47,755	3,021
2	123,944	115,496	8,448
3	225,148	203,880	21,268
4	321,247	279,752	41,495
5	445,847	377,909	67,938
6	432,881	338,321	94,560
7	212,637	170,288	42,349
8	109,976	88,933	21,043
9	52,789	45,847	6,942
10	63,763	61,545	2,218
11	66,280	63,187	3,093
12	75,526	72,733	2,793
99	324,041		324,041

Angling pressure was summarized by the 22 major drainages within the state (Table 6). The lower Clark Fork River drainage contains the angling pressure from all the streams and lakes below the Bitterroot River, excluding the pressure from those waters contained in other drainages listed (Flathead, Kootenai, and Bitterroot). The Upper Clark Fork River drainage, likewise, contains all the angling pressure for waters above the Bitterroot

River drainage excluding the pressure for those drainages listed. The upper Flathead River drainage contains the South Fork Flathead River drainage and all waters above the confluence of the South Fork Flathead River. The lower Flathead River drainage includes those waters below the confluence of the South Fork Flathead River including Flathead Lake and those waters (where pressure was obtainable) on the Kootenai-Salish Indian reservation. The lower Missouri River drainage covers all waters below the confluence of the Marias River, while the upper Missouri River drainage incorporates the area above the Marias River, again excluding those drainages listed separately. The lower Yellowstone River drainage represents the area below the mouth of the Bighorn River while the upper Yellowstone River drainage covers the Bighorn River drainage and all waters above the confluence of the Bighorn River.

The pressure by drainage ranged from 425,326 angler days for the Upper Missouri River drainage to 2,635 angler days for the Little Missouri River drainage.

Table 6. Angling pressure in angler days by drainage by water type for the 1995 angling year Mar '95 through Feb '96

TOTAL PRESSURE ESTIMATES THROUGH SUMMATION

DRAIN / WATER TYPE	TOTALS PRESSURE	TOTALS TRIPS	RESIDENTS PRESSURE	RESIDENTS TRIPS	NONRESIDENTS PRESSURE	NONRESIDENTS TRIPS
BEAVERHEAD DR						
SALMONID STREAM	37374.	915.	17117.	413.	20257.	502.
SALMONID LAKE	52334.	1112.	29591.	611.	22743.	501.
NONSALMONID STREAM	0.	0.	0.	0.	0.	0.
NONSALMONID LAKE	0.	0.	0.	0.	0.	0.
UNDESIG STRM MGMT	31.	1.	0.	0.	31.	1.
UNDESIG LAKE MGMT	464.	10.	402.	8.	62.	2.
DRAINAGE PRESSURE ESTIMATES:	90203.	2038.	47110.	1032.	43093.	1006.
BIG HOLE DR						
SALMONID STREAM	80444.	2057.	50539.	1308.	29905.	749.
SALMONID LAKE	7512.	183.	6517.	156.	995.	27.
NONSALMONID STREAM	0.	0.	0.	0.	0.	0.
NONSALMONID LAKE	0.	0.	0.	0.	0.	0.
UNDESIG STRM MGMT	358.	11.	110.	3.	248.	8.
UNDESIG LAKE MGMT	338.	8.	307.	7.	31.	1.
DRAINAGE PRESSURE ESTIMATES:	88652.	2259.	57473.	1474.	31179.	785.
BITTERROOT DR						
SALMONID STREAM	84928.	2070.	60202.	1452.	24726.	618.
SALMONID LAKE	5389.	134.	4820.	115.	569.	19.
NONSALMONID STREAM	0.	0.	0.	0.	0.	0.
NONSALMONID LAKE	0.	0.	0.	0.	0.	0.
UNDESIG STRM MGMT	821.	24.	511.	14.	310.	10.
UNDESIG LAKE MGMT	835.	21.	711.	17.	124.	4.
DRAINAGE PRESSURE ESTIMATES:	91973.	2249.	66244.	1598.	25729.	651.
BLACKFOOT DR						
SALMONID STREAM	45895.	1144.	32550.	786.	13345.	358.
SALMONID LAKE	36849.	867.	32092.	776.	4757.	91.
NONSALMONID STREAM	0.	0.	0.	0.	0.	0.
NONSALMONID LAKE	0.	0.	0.	0.	0.	0.
UNDESIG STRM MGMT	448.	12.	208.	5.	240.	7.
UNDESIG LAKE MGMT	391.	9.	328.	8.	63.	1.
DRAINAGE PRESSURE ESTIMATES:	83583.	2032.	65178.	1575.	18405.	457.
LOWER CLARK FORK DR						
SALMONID STREAM	103366.	2522.	72120.	1755.	31246.	767.
SALMONID LAKE	28062.	720.	25204.	646.	2858.	74.
NONSALMONID STREAM	0.	0.	0.	0.	0.	0.
NONSALMONID LAKE	26.	1.	26.	1.	0.	0.
UNDESIG STRM MGMT	968.	27.	221.	6.	747.	21.
UNDESIG LAKE MGMT	1212.	28.	964.	20.	248.	8.
DRAINAGE PRESSURE ESTIMATES:	133634.	3298.	98535.	2428.	35099.	870.

Table 6. Angling pressure in angler days by drainage by water type for the 1995 angling year Mar '95 through Feb '96 (continued)

DRAIN	WATER TYPE	TOTALS PRESSURE	TOTALS TRIPS	RESIDENTS PRESSURE	RESIDENTS TRIPS	NONRESIDENTS PRESSURE	NONRESIDENTS TRIPS
UPPER CLARK FORK DR							
	SALMONID STREAM	83698.	2023.	52299.	1307.	31399.	716.
	SALMONID LAKE	54109.	1199.	44002.	970.	10107.	229.
	NONSALMONID STREAM	0.	0.	0.	0.	0.	0.
	NONSALMONID LAKE	0.	0.	0.	0.	0.	0.
	UNDESIG STRM MGMT	422.	12.	236.	6.	186.	6.
	UNDESIG LAKE MGMT	2158.	49.	1798.	44.	360.	5.
	DRAINAGE PRESSURE ESTIMATES:	140387.	3283.	98335.	2327.	42052.	956.
LOWER FLATHEAD DR							
	SALMONID STREAM	46552.	1132.	37619.	906.	8933.	226.
	SALMONID LAKE	127983.	3193.	105105.	2562.	22878.	631.
	NONSALMONID STREAM	0.	0.	0.	0.	0.	0.
	NONSALMONID LAKE	10215.	274.	9959.	266.	256.	8.
	UNDESIG STRM MGMT	1105.	32.	613.	17.	492.	15.
	UNDESIG LAKE MGMT	3323.	91.	3075.	83.	248.	8.
	DRAINAGE PRESSURE ESTIMATES:	189178.	4722.	156371.	3834.	32807.	888.
UPPER FLATHEAD DR							
	SALMONID STREAM	20264.	504.	13346.	325.	6918.	179.
	SALMONID LAKE	16552.	393.	14977.	342.	1575.	51.
	NONSALMONID STREAM	0.	0.	0.	0.	0.	0.
	NONSALMONID LAKE	0.	0.	0.	0.	0.	0.
	UNDESIG STRM MGMT	303.	8.	272.	7.	31.	1.
	UNDESIG LAKE MGMT	1622.	37.	1201.	28.	421.	9.
	DRAINAGE PRESSURE ESTIMATES:	38741.	942.	29796.	702.	8945.	240.
GALLATIN DR							
	SALMONID STREAM	86658.	2108.	52504.	1295.	34154.	813.
	SALMONID LAKE	11722.	293.	9579.	234.	2143.	59.
	NONSALMONID STREAM	0.	0.	0.	0.	0.	0.
	NONSALMONID LAKE	0.	0.	0.	0.	0.	0.
	UNDESIG STRM MGMT	1031.	26.	876.	21.	155.	5.
	UNDESIG LAKE MGMT	447.	10.	447.	10.	0.	0.
	DRAINAGE PRESSURE ESTIMATES:	99858.	2437.	63406.	1560.	36452.	877.
JEFFERSON DR							
	SALMONID STREAM	16005.	418.	13651.	352.	2354.	66.
	SALMONID LAKE	14450.	330.	13686.	309.	764.	21.
	NONSALMONID STREAM	0.	0.	0.	0.	0.	0.
	NONSALMONID LAKE	0.	0.	0.	0.	0.	0.
	UNDESIG STRM MGMT	153.	4.	122.	3.	31.	1.
	UNDESIG LAKE MGMT	222.	6.	222.	6.	0.	0.
	DRAINAGE PRESSURE ESTIMATES:	30830.	758.	27681.	670.	3149.	88.

Table 6. Angling pressure in angler days by drainage by water type for the 1995 angling year Mar '95 through Feb '96 (continued)

DRAIN	WATER TYPE	TOTALS PRESSURE	TOTALS TRIPS	RESIDENTS PRESSURE	RESIDENTS TRIPS	NONRESIDENTS PRESSURE	NONRESIDENTS TRIPS
KOOTENAI DR							
	SALMONID STREAM	37475.	906.	24476.	602.	12999.	304.
	SALMONID LAKE	50394.	1290.	29347.	734.	21047.	556.
	NONSALMONID STREAM	0.	0.	0.	0.	0.	0.
	NONSALMONID LAKE	1274.	33.	954.	26.	320.	7.
	UNDESIG STRM MGMT	1410.	32.	883.	23.	527.	9.
	UNDESIG LAKE MGMT	818.	20.	498.	13.	320.	7.
	DRAINAGE PRESSURE ESTIMATES:	91371.	2281.	56158.	1398.	35213.	883.
LITTLE MISSOURI DR							
	SALMONID STREAM	0.	0.	0.	0.	0.	0.
	SALMONID LAKE	1814.	50.	1705.	48.	109.	2.
	NONSALMONID STREAM	204.	6.	204.	6.	0.	0.
	NONSALMONID LAKE	617.	17.	617.	17.	0.	0.
	UNDESIG STRM MGMT	0.	0.	0.	0.	0.	0.
	UNDESIG LAKE MGMT	0.	0.	0.	0.	0.	0.
	DRAINAGE PRESSURE ESTIMATES:	2635.	73.	2526.	71.	109.	2.
MADISON DR							
	SALMONID STREAM	118286.	3030.	41813.	1039.	76473.	1991.
	SALMONID LAKE	47372.	1216.	20582.	522.	26790.	694.
	NONSALMONID STREAM	0.	0.	0.	0.	0.	0.
	NONSALMONID LAKE	0.	0.	0.	0.	0.	0.
	UNDESIG STRM MGMT	308.	9.	246.	7.	62.	2.
	UNDESIG LAKE MGMT	570.	14.	477.	11.	93.	3.
	DRAINAGE PRESSURE ESTIMATES:	166536.	4269.	63118.	1579.	103418.	2690.
MARIAS DR							
	SALMONID STREAM	5832.	136.	4722.	101.	1110.	35.
	SALMONID LAKE	47637.	1118.	43095.	1039.	4542.	79.
	NONSALMONID STREAM	5702.	148.	5274.	139.	428.	9.
	NONSALMONID LAKE	10656.	255.	10379.	249.	277.	6.
	UNDESIG STRM MGMT	610.	18.	548.	16.	62.	2.
	UNDESIG LAKE MGMT	1866.	45.	1496.	36.	370.	9.
	DRAINAGE PRESSURE ESTIMATES:	72303.	1720.	65514.	1580.	6789.	140.
MILK DR							
	SALMONID STREAM	6730.	156.	6619.	153.	111.	3.
	SALMONID LAKE	33005.	880.	32850.	875.	155.	5.
	NONSALMONID STREAM	4974.	122.	4943.	121.	31.	1.
	NONSALMONID LAKE	9564.	215.	9440.	211.	124.	4.
	UNDESIG STRM MGMT	430.	12.	430.	12.	0.	0.
	UNDESIG LAKE MGMT	3127.	67.	2994.	63.	133.	4.
	DRAINAGE PRESSURE ESTIMATES:	57830.	1452.	57276.	1435.	554.	17.

Table 6. Angling pressure in angler days by drainage by water type for the 1995 angling year Mar '95 through Feb '96 (continued)

DRAIN	WATER TYPE	TOTALS PRESSURE	TOTALS TRIPS	RESIDENTS PRESSURE	RESIDENTS TRIPS	NONRESIDENTS PRESSURE	NONRESIDENTS TRIPS
LOWER MISSOURI DR							
	SALMONID STREAM	23364.	543.	20733.	479.	2631.	64.
	SALMONID LAKE	17583.	420.	16780.	401.	803.	19.
	NONSALMONID STREAM	29414.	808.	27842.	770.	1572.	38.
	NONSALMONID LAKE	68547.	1711.	60696.	1515.	7851.	196.
	UNDESIG STRM MGMT	954.	29.	923.	28.	31.	1.
	UNDESIG LAKE MGMT	5025.	121.	4746.	112.	279.	9.
	DRAINAGE PRESSURE ESTIMATES:	144887.	3632.	131720.	3305.	13167.	327.
UPPER MISSOURI DR							
	SALMONID STREAM	166775.	3979.	133038.	3183.	33737.	796.
	SALMONID LAKE	244909.	6111.	220859.	5474.	24050.	637.
	NONSALMONID STREAM	7111.	173.	6325.	155.	786.	18.
	NONSALMONID LAKE	0.	0.	0.	0.	0.	0.
	UNDESIG STRM MGMT	737.	19.	613.	15.	124.	4.
	UNDESIG LAKE MGMT	5794.	146.	5563.	140.	231.	6.
	DRAINAGE PRESSURE ESTIMATES:	425326.	10428.	366398.	8967.	58928.	1461.
MUSSELSHELL DR							
	SALMONID STREAM	10039.	251.	9805.	243.	234.	8.
	SALMONID LAKE	20895.	533.	20477.	519.	418.	14.
	NONSALMONID STREAM	0.	0.	0.	0.	0.	0.
	NONSALMONID LAKE	9309.	215.	9216.	212.	93.	3.
	UNDESIG STRM MGMT	289.	9.	168.	4.	121.	5.
	UNDESIG LAKE MGMT	3140.	67.	3078.	65.	62.	2.
	DRAINAGE PRESSURE ESTIMATES:	43672.	1075.	42744.	1043.	928.	32.
ST MARY DR							
	SALMONID STREAM	69.	2.	69.	2.	0.	0.
	SALMONID LAKE	4506.	105.	3877.	95.	629.	10.
	NONSALMONID STREAM	0.	0.	0.	0.	0.	0.
	NONSALMONID LAKE	245.	4.	214.	3.	31.	1.
	UNDESIG STRM MGMT	0.	0.	0.	0.	0.	0.
	UNDESIG LAKE MGMT	0.	0.	0.	0.	0.	0.
	DRAINAGE PRESSURE ESTIMATES:	4820.	111.	4160.	100.	660.	11.
SUN DR							
	SALMONID STREAM	12658.	324.	8445.	204.	4213.	120.
	SALMONID LAKE	18921.	463.	18184.	440.	737.	23.
	NONSALMONID STREAM	0.	0.	0.	0.	0.	0.
	NONSALMONID LAKE	658.	16.	627.	15.	31.	1.
	UNDESIG STRM MGMT	280.	8.	280.	8.	0.	0.
	UNDESIG LAKE MGMT	1421.	33.	1266.	28.	155.	5.
	DRAINAGE PRESSURE ESTIMATES:	33938.	844.	28802.	695.	5136.	149.

Table 6. Angling pressure in angler days by drainage by water type for the 1995 angling year Mar '95 through Feb '96 (continued)

DRAIN	WATER TYPE	TOTALS PRESSURE	TOTALS TRIPS	RESIDENTS PRESSURE	RESIDENTS TRIPS	NONRESIDENTS PRESSURE	NONRESIDENTS TRIPS
LOWER YELLOWSTONE DR							
	SALMONID STREAM	4497.	130.	2993.	86.	1504.	44.
	SALMONID LAKE	6798.	147.	6615.	140.	183.	7.
	NONSALMONID STREAM	37883.	1022.	36764.	986.	1119.	36.
	NONSALMONID LAKE	31593.	855.	22036.	601.	9557.	254.
	UNDESIG STRM MGMT	47.	1.	47.	1.	0.	0.
	UNDESIG LAKE MGMT	2247.	63.	2185.	61.	62.	2.
	DRAINAGE PRESSURE ESTIMATES:	83065.	2218.	70640.	1875.	12425.	343.
UPPER YELLOWSTONE DR							
	SALMONID STREAM	278061.	6997.	180246.	4403.	97815.	2594.
	SALMONID LAKE	80028.	1969.	66801.	1636.	13227.	333.
	NONSALMONID STREAM	9604.	248.	9014.	229.	590.	19.
	NONSALMONID LAKE	1840.	48.	1809.	47.	31.	1.
	UNDESIG STRM MGMT	1981.	47.	584.	15.	1397.	32.
	UNDESIG LAKE MGMT	4300.	121.	2381.	61.	1919.	60.
	DRAINAGE PRESSURE ESTIMATES:	375814.	9430.	260835.	6391.	114979.	3039.
TOTAL							
	SALMONID STREAM	1268970.	31347.	834906.	20394.	434064.	10953.
	SALMONID LAKE	928824.	22726.	766745.	18644.	162079.	4082.
	NONSALMONID STREAM	94892.	2527.	90366.	2406.	4526.	121.
	NONSALMONID LAKE	144544.	3644.	125973.	3163.	18571.	481.
	UNDESIG STRM MGMT	28305.	774.	13517.	351.	14788.	423.
	UNDESIG LAKE MGMT	39320.	966.	34139.	821.	5181.	145.
	STATEWIDE PRESSURE ESTIMATES:	2504855.	61984.	1865646.	45779.	639209.	16205.

1995 SUMMER

The "summer" season for angling in Montana is considered as that period of the year between the first of May through the end of September. In 1995 1,961,983 (78.3%) days of angling pressure occurred during this period (Table 7). Percentages of angling pressure within the regions for the summer period was very similar to the entire year ranging from 75.1% for region 4 to 80.6% for region 3.

Residents accounted for 69.8% of the "summer" angling pressure (1,370,240 angling days). Within the regions the residents comprised anywhere from as high as 92.6% of the "summer" angling pressure in region 6 to as low as 55.6% of the pressure in region 3.

Table 7. Angling pressure in angler days by region by water type for the "summer" season of May '95 through September '95

REG	WATER TYPE	TOTALS PRESSURE	TOTALS TRIPS	RESIDENTS PRESSURE	RESIDENTS TRIPS	NON-RESIDENTS PRESSURE	NON-RESIDENTS TRIPS
1							
	SALMONID STREAM	111908.	2938.	77352.	2056.	34556.	882.
	SALMONID LAKE	173370.	4728.	128222.	3483.	45148.	1245.
	NONSALMONID STREAM	0.	0.	0.	0.	0.	0.
	NONSALMONID LAKE	8510.	251.	7955.	237.	555.	14.
	UNDESIG STRM MGMT	2786.	71.	1516.	42.	1270.	29.
	UNDESIG LAKE MGMT	5437.	145.	4355.	118.	1082.	27.
	REGIONAL PRESSURE ESTIMATES:	302011.	8133.	219400.	5936.	82611.	2197.
2							
	SALMONID STREAM	217565.	5544.	136785.	3561.	80780.	1983.
	SALMONID LAKE	75830.	1894.	60450.	1546.	15380.	348.
	NONSALMONID STREAM	0.	0.	0.	0.	0.	0.
	NONSALMONID LAKE	0.	0.	0.	0.	0.	0.
	UNDESIG STRM MGMT	2187.	64.	924.	24.	1263.	40.
	UNDESIG LAKE MGMT	2761.	66.	2122.	52.	639.	14.
	REGIONAL PRESSURE ESTIMATES:	298343.	7568.	200281.	5183.	98062.	2385.
3							
	SALMONID STREAM	363733.	9523.	182638.	4784.	181095.	4739.
	SALMONID LAKE	172941.	4542.	115095.	3082.	57846.	1460.
	NONSALMONID STREAM	0.	0.	0.	0.	0.	0.
	NONSALMONID LAKE	0.	0.	0.	0.	0.	0.
	UNDESIG STRM MGMT	3356.	82.	1860.	47.	1496.	35.
	UNDESIG LAKE MGMT	1962.	51.	1497.	36.	465.	15.
	REGIONAL PRESSURE ESTIMATES:	541992.	14198.	301090.	7949.	240902.	6249.
4							
	SALMONID STREAM	150985.	3953.	112190.	2992.	38795.	961.
	SALMONID LAKE	184788.	5012.	161671.	4455.	23117.	557.
	NONSALMONID STREAM	15678.	414.	13834.	370.	1844.	44.
	NONSALMONID LAKE	14958.	409.	14464.	396.	494.	13.
	UNDESIG STRM MGMT	1390.	38.	1204.	32.	186.	6.
	UNDESIG LAKE MGMT	8992.	244.	8081.	219.	911.	25.
	REGIONAL PRESSURE ESTIMATES:	376791.	10070.	311444.	8464.	65347.	1606.
5							
	SALMONID STREAM	163940.	4400.	102341.	2699.	61599.	1701.
	SALMONID LAKE	62429.	1641.	51181.	1350.	11248.	291.
	NONSALMONID STREAM	5927.	165.	5337.	146.	590.	19.
	NONSALMONID LAKE	1651.	46.	1620.	45.	31.	1.
	UNDESIG STRM MGMT	856.	26.	340.	9.	516.	17.
	UNDESIG LAKE MGMT	5097.	141.	3469.	90.	1628.	51.
	REGIONAL PRESSURE ESTIMATES:	239900.	6419.	164288.	4339.	75612.	2080.

Table 7. Angling pressure in angler days by region by water type for the "summer" season of May '95 through September '95 (continued)

REG	WATER TYPE	TOTALS PRESSURE	TOTALS TRIPS	RESIDENTS PRESSURE	RESIDENTS TRIPS	NON-RESIDENTS PRESSURE	NON-RESIDENTS TRIPS
6							
	SALMONID STREAM	4574.	129.	4463.	126.	111.	3.
	SALMONID LAKE	28201.	782.	28046.	777.	155.	5.
	NONSALMONID STREAM	21982.	633.	21156.	614.	826.	19.
	NONSALMONID LAKE	59045.	1577.	51644.	1395.	7401.	182.
	UNDESIG STRM MGMT	507.	14.	507.	14.	0.	0.
	UNDESIG LAKE MGMT	3146.	87.	2920.	80.	226.	7.
	REGIONAL PRESSURE ESTIMATES:	117455.	3222.	108736.	3006.	8719.	216.
7							
	SALMONID STREAM	4311.	124.	2849.	82.	1462.	42.
	SALMONID LAKE	5659.	158.	5336.	148.	323.	10.
	NONSALMONID STREAM	30456.	862.	29462.	828.	994.	34.
	NONSALMONID LAKE	27137.	764.	19356.	559.	7781.	205.
	UNDESIG STRM MGMT	464.	12.	464.	12.	0.	0.
	UNDESIG LAKE MGMT	1971.	60.	1909.	58.	62.	2.
	REGIONAL PRESSURE ESTIMATES:	69998.	1980.	59376.	1687.	10622.	293.
TOTAL							
	SALMONID STREAM	1017016.	26611.	618618.	16300.	398398.	10311.
	SALMONID LAKE	703218.	18757.	550001.	14841.	153217.	3916.
	NONSALMONID STREAM	74043.	2074.	69789.	1958.	4254.	116.
	NONSALMONID LAKE	111301.	3047.	95039.	2632.	16262.	415.
	UNDESIG STRM MGMT	27039.	738.	12440.	320.	14599.	418.
	UNDESIG LAKE MGMT	29366.	794.	24353.	653.	5013.	141.
	STATEWIDE PRESSURE ESTIMATES:	1961983.	52021.	1370240.	36704.	591743.	15317.

"Summer" angling pressure by drainage (Table 8) ranged from 313,012 angler days for the upper Missouri River drainage to 1,845 angler days for the Little Missouri River drainage.

Angling pressure for residents by drainage ranged from a low of 33.5% for the Madison River drainage to a high of 98.6% for the Milk drainage.

Table 8. Angling pressure in angler days by drainage by water type for the 1995 "summer" angling season
May '95 through September '95

DRAIN	WATER TYPE	TOTALS PRESSURE	TOTALS TRIPS	RESIDENTS PRESSURE	RESIDENTS TRIPS	NONRESIDENTS PRESSURE	NONRESIDENTS TRIPS
BEAVERHEAD DR							
	SALMONID STREAM	32738.	835.	13939.	356.	18799.	479.
	SALMONID LAKE	35558.	868.	14962.	396.	20596.	472.
	NONSALMONID STREAM	0.	0.	0.	0.	0.	0.
	NONSALMONID LAKE	0.	0.	0.	0.	0.	0.
	UNDESIG STRM MGMT	31.	1.	0.	0.	31.	1.
	UNDESIG LAKE MGMT	290.	8.	228.	6.	62.	2.
	DRAINAGE PRESSURE ESTIMATES:	68617.	1712.	29129.	758.	39488.	954.
BIG HOLE DR							
	SALMONID STREAM	73466.	1920.	46638.	1220.	26828.	700.
	SALMONID LAKE	7045.	176.	6113.	150.	932.	26.
	NONSALMONID STREAM	0.	0.	0.	0.	0.	0.
	NONSALMONID LAKE	0.	0.	0.	0.	0.	0.
	UNDESIG STRM MGMT	327.	10.	79.	2.	248.	8.
	UNDESIG LAKE MGMT	178.	5.	147.	4.	31.	1.
	DRAINAGE PRESSURE ESTIMATES:	81016.	2111.	52977.	1376.	28039.	735.
BITTERROOT DR							
	SALMONID STREAM	60698.	1585.	40793.	1058.	19905.	527.
	SALMONID LAKE	3854.	98.	3349.	82.	505.	16.
	NONSALMONID STREAM	0.	0.	0.	0.	0.	0.
	NONSALMONID LAKE	0.	0.	0.	0.	0.	0.
	UNDESIG STRM MGMT	821.	24.	511.	14.	310.	10.
	UNDESIG LAKE MGMT	642.	16.	518.	12.	124.	4.
	DRAINAGE PRESSURE ESTIMATES:	66015.	1723.	45171.	1166.	20844.	557.
BLACKFOOT DR							
	SALMONID STREAM	39094.	1024.	26255.	682.	12839.	342.
	SALMONID LAKE	29906.	750.	25625.	666.	4281.	84.
	NONSALMONID STREAM	0.	0.	0.	0.	0.	0.
	NONSALMONID LAKE	0.	0.	0.	0.	0.	0.
	UNDESIG STRM MGMT	448.	12.	208.	5.	240.	7.
	UNDESIG LAKE MGMT	243.	7.	243.	7.	0.	0.
	DRAINAGE PRESSURE ESTIMATES:	69691.	1793.	52331.	1360.	17360.	433.
LOWER CLARK FORK DR							
	SALMONID STREAM	74416.	1903.	46110.	1220.	28306.	683.
	SALMONID LAKE	23064.	628.	20206.	554.	2858.	74.
	NONSALMONID STREAM	0.	0.	0.	0.	0.	0.
	NONSALMONID LAKE	26.	1.	26.	1.	0.	0.
	UNDESIG STRM MGMT	905.	25.	158.	4.	747.	21.
	UNDESIG LAKE MGMT	798.	23.	550.	15.	248.	8.
	DRAINAGE PRESSURE ESTIMATES:	99209.	2580.	67050.	1794.	32159.	786.

Table 8. Angling pressure in angler days by drainage by water type for the 1995 "summer" angling season May '95 through September '95 (continued)

DRAIN	WATER TYPE	TOTALS PRESSURE	TOTALS TRIPS	RESIDENTS PRESSURE	RESIDENTS TRIPS	NONRESIDENTS PRESSURE	NONRESIDENTS TRIPS
UPPER CLARK FORK DR							
	SALMONID STREAM	69094.	1718.	41212.	1083.	27882.	635.
	SALMONID LAKE	38802.	967.	29569.	749.	9233.	218.
	NONSALMONID STREAM	0.	0.	0.	0.	0.	0.
	NONSALMONID LAKE	0.	0.	0.	0.	0.	0.
	UNDESIG STRM MGMT	422.	12.	236.	6.	186.	6.
	UNDESIG LAKE MGMT	1643.	36.	1283.	31.	360.	5.
	DRAINAGE PRESSURE ESTIMATES:	109961.	2733.	72300.	1869.	37661.	864.
LOWER FLATHEAD DR							
	SALMONID STREAM	35319.	965.	27031.	748.	8288.	217.
	SALMONID LAKE	99712.	2735.	78608.	2137.	21104.	598.
	NONSALMONID STREAM	0.	0.	0.	0.	0.	0.
	NONSALMONID LAKE	7293.	218.	7058.	211.	235.	7.
	UNDESIG STRM MGMT	859.	27.	367.	12.	492.	15.
	UNDESIG LAKE MGMT	2515.	73.	2267.	65.	248.	8.
	DRAINAGE PRESSURE ESTIMATES:	145698.	4018.	115331.	3173.	30367.	845.
UPPER FLATHEAD DR							
	SALMONID STREAM	18837.	474.	12044.	297.	6793.	177.
	SALMONID LAKE	10733.	303.	9179.	253.	1554.	50.
	NONSALMONID STREAM	0.	0.	0.	0.	0.	0.
	NONSALMONID LAKE	0.	0.	0.	0.	0.	0.
	UNDESIG STRM MGMT	263.	7.	232.	6.	31.	1.
	UNDESIG LAKE MGMT	1539.	36.	1118.	27.	421.	9.
	DRAINAGE PRESSURE ESTIMATES:	31372.	820.	22573.	583.	8799.	237.
GALLATIN DR							
	SALMONID STREAM	68912.	1768.	37743.	999.	31169.	769.
	SALMONID LAKE	10002.	257.	7859.	198.	2143.	59.
	NONSALMONID STREAM	0.	0.	0.	0.	0.	0.
	NONSALMONID LAKE	0.	0.	0.	0.	0.	0.
	UNDESIG STRM MGMT	1031.	26.	876.	21.	155.	5.
	UNDESIG LAKE MGMT	447.	10.	447.	10.	0.	0.
	DRAINAGE PRESSURE ESTIMATES:	80392.	2061.	46925.	1228.	33467.	833.
JEFFERSON DR							
	SALMONID STREAM	12553.	345.	10241.	281.	2312.	64.
	SALMONID LAKE	9964.	263.	9200.	242.	764.	21.
	NONSALMONID STREAM	0.	0.	0.	0.	0.	0.
	NONSALMONID LAKE	0.	0.	0.	0.	0.	0.
	UNDESIG STRM MGMT	153.	4.	122.	3.	31.	1.
	UNDESIG LAKE MGMT	182.	5.	182.	5.	0.	0.
	DRAINAGE PRESSURE ESTIMATES:	22852.	617.	19745.	531.	3107.	86.

Table 8. Angling pressure in angler days by drainage by water type for the 1995 "summer" angling season May '95 through September '95 (continued)

DRAIN	WATER TYPE	TOTALS PRESSURE	TOTALS TRIPS	RESIDENTS PRESSURE	RESIDENTS TRIPS	NONRESIDENTS PRESSURE	NONRESIDENTS TRIPS
KOOTENAI DR							
	SALMONID STREAM	32463.	825.	21140.	541.	11323.	284.
	SALMONID LAKE	43054.	1139.	22092.	587.	20962.	552.
	NONSALMONID STREAM	0.	0.	0.	0.	0.	0.
	NONSALMONID LAKE	1191.	32.	871.	25.	320.	7.
	UNDESIG STRM MGMT	1410.	32.	883.	23.	527.	9.
	UNDESIG LAKE MGMT	818.	20.	498.	13.	320.	7.
	DRAINAGE PRESSURE ESTIMATES:	78936.	2048.	45484.	1189.	33452.	859.
LITTLE MISSOURI DR							
	SALMONID STREAM	0.	0.	0.	0.	0.	0.
	SALMONID LAKE	1145.	31.	1036.	29.	109.	2.
	NONSALMONID STREAM	164.	5.	164.	5.	0.	0.
	NONSALMONID LAKE	536.	15.	536.	15.	0.	0.
	UNDESIG STRM MGMT	0.	0.	0.	0.	0.	0.
	UNDESIG LAKE MGMT	0.	0.	0.	0.	0.	0.
	DRAINAGE PRESSURE ESTIMATES:	1845.	51.	1736.	49.	109.	2.
MADISON DR							
	SALMONID STREAM	103730.	2765.	31268.	822.	72462.	1943.
	SALMONID LAKE	43559.	1146.	17630.	467.	25929.	679.
	NONSALMONID STREAM	0.	0.	0.	0.	0.	0.
	NONSALMONID LAKE	0.	0.	0.	0.	0.	0.
	UNDESIG STRM MGMT	308.	9.	246.	7.	62.	2.
	UNDESIG LAKE MGMT	539.	13.	446.	10.	93.	3.
	DRAINAGE PRESSURE ESTIMATES:	148136.	3933.	49590.	1306.	98546.	2627.
MARIAS DR							
	SALMONID STREAM	4361.	118.	3251.	83.	1110.	35.
	SALMONID LAKE	33389.	873.	28911.	797.	4478.	76.
	NONSALMONID STREAM	4965.	129.	4537.	120.	428.	9.
	NONSALMONID LAKE	8303.	219.	8026.	213.	277.	6.
	UNDESIG STRM MGMT	610.	18.	548.	16.	62.	2.
	UNDESIG LAKE MGMT	1500.	39.	1130.	30.	370.	9.
	DRAINAGE PRESSURE ESTIMATES:	53128.	1396.	46403.	1259.	6725.	137.
MILK DR							
	SALMONID STREAM	4341.	116.	4230.	113.	111.	3.
	SALMONID LAKE	25067.	696.	24912.	691.	155.	5.
	NONSALMONID STREAM	4047.	106.	4016.	105.	31.	1.
	NONSALMONID LAKE	5264.	148.	5140.	144.	124.	4.
	UNDESIG STRM MGMT	240.	6.	240.	6.	0.	0.
	UNDESIG LAKE MGMT	1828.	49.	1695.	45.	133.	4.
	DRAINAGE PRESSURE ESTIMATES:	40787.	1121.	40233.	1104.	554.	17.

Table 8. Angling pressure in angler days by drainage by water type for the 1995 "summer" angling season May '95 through September '95 (continued)

DRAIN	WATER TYPE	TOTALS PRESSURE	TOTALS TRIPS	RESIDENTS PRESSURE	RESIDENTS TRIPS	NONRESIDENTS PRESSURE	NONRESIDENTS TRIPS
LOWER MISSOURI DR							
	SALMONID STREAM	16938.	452.	14370.	389.	2568.	63.
	SALMONID LAKE	11273.	312.	10470.	293.	803.	19.
	NONSALMONID STREAM	23645.	686.	22220.	651.	1425.	35.
	NONSALMONID LAKE	55053.	1468.	47434.	1279.	7619.	189.
	UNDESIG STRM MGMT	543.	16.	512.	15.	31.	1.
	UNDESIG LAKE MGMT	3654.	104.	3375.	95.	279.	9.
	DRAINAGE PRESSURE ESTIMATES:	111106.	3038.	98381.	2722.	12725.	316.
UPPER MISSOURI DR							
	SALMONID STREAM	125400.	3266.	93608.	2503.	31792.	763.
	SALMONID LAKE	177604.	4850.	154406.	4240.	23198.	610.
	NONSALMONID STREAM	5349.	135.	4563.	117.	786.	18.
	NONSALMONID LAKE	0.	0.	0.	0.	0.	0.
	UNDESIG STRM MGMT	737.	19.	613.	15.	124.	4.
	UNDESIG LAKE MGMT	3922.	106.	3691.	100.	231.	6.
	DRAINAGE PRESSURE ESTIMATES:	313012.	8376.	256881.	6975.	56131.	1401.
MUSSELSHELL DR							
	SALMONID STREAM	7746.	212.	7512.	204.	234.	8.
	SALMONID LAKE	13845.	399.	13470.	387.	375.	12.
	NONSALMONID STREAM	0.	0.	0.	0.	0.	0.
	NONSALMONID LAKE	5506.	156.	5413.	153.	93.	3.
	UNDESIG STRM MGMT	289.	9.	168.	4.	121.	5.
	UNDESIG LAKE MGMT	1818.	49.	1756.	47.	62.	2.
	DRAINAGE PRESSURE ESTIMATES:	29204.	825.	28319.	795.	885.	30.
ST MARY DR							
	SALMONID STREAM	69.	2.	69.	2.	0.	0.
	SALMONID LAKE	3352.	85.	2723.	75.	629.	10.
	NONSALMONID STREAM	0.	0.	0.	0.	0.	0.
	NONSALMONID LAKE	75.	2.	44.	1.	31.	1.
	UNDESIG STRM MGMT	0.	0.	0.	0.	0.	0.
	UNDESIG LAKE MGMT	0.	0.	0.	0.	0.	0.
	DRAINAGE PRESSURE ESTIMATES:	3496.	89.	2836.	78.	660.	11.
SUN DR							
	SALMONID STREAM	11240.	300.	7049.	181.	4191.	119.
	SALMONID LAKE	14257.	384.	13520.	361.	737.	23.
	NONSALMONID STREAM	0.	0.	0.	0.	0.	0.
	NONSALMONID LAKE	397.	11.	366.	10.	31.	1.
	UNDESIG STRM MGMT	185.	5.	185.	5.	0.	0.
	UNDESIG LAKE MGMT	1024.	27.	869.	22.	155.	5.
	DRAINAGE PRESSURE ESTIMATES:	27103.	727.	21989.	579.	5114.	148.

Table 8. Angling pressure in angler days by drainage by water type for the 1995 "summer" angling season May '95 through September '95 (continued)

DRAIN	WATER TYPE	TOTALS PRESSURE	TOTALS TRIPS	RESIDENTS PRESSURE	RESIDENTS TRIPS	NONRESIDENTS PRESSURE	NONRESIDENTS TRIPS
LOWER YELLOWSTONE DR							
	SALMONID STREAM	4311.	124.	2849.	82.	1462.	42.
	SALMONID LAKE	4310.	121.	4127.	114.	183.	7.
	NONSALMONID STREAM	29946.	848.	28952.	814.	994.	34.
	NONSALMONID LAKE	26006.	731.	18505.	535.	7501.	196.
	UNDESIG STRM MGMT	47.	1.	47.	1.	0.	0.
	UNDESIG LAKE MGMT	1783.	55.	1721.	53.	62.	2.
	DRAINAGE PRESSURE ESTIMATES:	66403.	1880.	56201.	1599.	10202.	281.
UPPER YELLOWSTONE DR							
	SALMONID STREAM	221290.	5894.	131266.	3436.	90024.	2458.
	SALMONID LAKE	63723.	1676.	52034.	1373.	11689.	303.
	NONSALMONID STREAM	5927.	165.	5337.	146.	590.	19.
	NONSALMONID LAKE	1651.	46.	1620.	45.	31.	1.
	UNDESIG STRM MGMT	1917.	44.	584.	15.	1333.	29.
	UNDESIG LAKE MGMT	4003.	113.	2189.	56.	1814.	57.
	DRAINAGE PRESSURE ESTIMATES:	298511.	7938.	193030.	5071.	105481.	2867.
TOTAL							
	SALMONID STREAM	1017016.	26611.	618618.	16300.	398398.	10311.
	SALMONID LAKE	703218.	18757.	550001.	14841.	153217.	3916.
	NONSALMONID STREAM	74043.	2074.	69789.	1958.	4254.	116.
	NONSALMONID LAKE	111301.	3047.	95039.	2632.	16262.	415.
	UNDESIG STRM MGMT	27039.	738.	12440.	320.	14599.	418.
	UNDESIG LAKE MGMT	29366.	794.	24353.	653.	5013.	141.
	STATEWIDE PRESSURE ESTIMATES:	1961983.	52021.	1370240.	36704.	591743.	15317.

1995 WINTER

The "winter" season for angling is from March through April and October through February of the following year. In 1995, 542,788 angler days (21.7%) of the annual fishing pressure occurred during this period (Table 9). Residents accounted for 91.3% of the total angling pressure for the "winter" season. Angling pressure was directed towards salmonid streams with 46.4% of the "winter" use. Salmonid lakes accounted for 41.6% of the use during this same time period.

The pressure from region to region ranged from a high of 130,521 angler days for Region 3 to a low of 17,911 angler days for Region 7. Angling pressure by residents for this period for each FWP region ranged from a low of 85.1% for region 2 to a high of 99.3% for region 6.

Winter angling pressure (Table 10) by drainage ranged from 112,309 angler days for the Upper Missouri River drainage to 788 angler days for the Little Missouri River drainage in Eastern Montana. Residents accounted for as low as 58.9% of the pressure in the Big Hole River drainage to a high of 100% of the pressure in the Little Missouri River, Milk, and St. Mary River drainages.

Table 9. Angling pressure in angler days by region by water type for the "winter" season of March '95 through April '95 and October '95 through February '96.

REG	WATER TYPE	TOTALS PRESSURE	TOTALS TRIPS	RESIDENTS PRESSURE	RESIDENTS TRIPS	NON-RESIDENTS PRESSURE	NON-RESIDENTS TRIPS
1							
	SALMONID STREAM	29479.	525.	26797.	483.	2682.	42.
	SALMONID LAKE	46113.	783.	44233.	745.	1880.	38.
	NONSALMONID STREAM	0.	0.	0.	0.	0.	0.
	NONSALMONID LAKE	3007.	57.	2986.	56.	21.	1.
	UNDESIG STRM MGMT	349.	8.	349.	8.	0.	0.
	UNDESIG LAKE MGMT	1305.	24.	1305.	24.	0.	0.
	REGIONAL PRESSURE ESTIMATES:						
		80253.	1397.	75670.	1316.	4583.	81.
2							
	SALMONID STREAM	62781.	1282.	51233.	1021.	11548.	261.
	SALMONID LAKE	24094.	393.	22680.	372.	1414.	21.
	NONSALMONID STREAM	0.	0.	0.	0.	0.	0.
	NONSALMONID LAKE	0.	0.	0.	0.	0.	0.
	UNDESIG STRM MGMT	0.	0.	0.	0.	0.	0.
	UNDESIG LAKE MGMT	773.	19.	710.	18.	63.	1.
	REGIONAL PRESSURE ESTIMATES:						
		87648.	1694.	74623.	1411.	13025.	283.
3							
	SALMONID STREAM	66636.	1262.	53040.	1061.	13596.	201.
	SALMONID LAKE	63301.	1126.	59785.	1064.	3516.	62.
	NONSALMONID STREAM	0.	0.	0.	0.	0.	0.
	NONSALMONID LAKE	0.	0.	0.	0.	0.	0.
	UNDESIG STRM MGMT	96.	4.	32.	1.	64.	3.
	UNDESIG LAKE MGMT	488.	8.	488.	8.	0.	0.
	REGIONAL PRESSURE ESTIMATES:						
		130521.	2400.	113345.	2134.	17176.	266.
4							
	SALMONID STREAM	46822.	779.	44793.	744.	2029.	35.
	SALMONID LAKE	62591.	1113.	62120.	1100.	471.	13.
	NONSALMONID STREAM	4322.	85.	4196.	83.	126.	2.
	NONSALMONID LAKE	6588.	102.	6588.	102.	0.	0.
	UNDESIG STRM MGMT	95.	3.	95.	3.	0.	0.
	UNDESIG LAKE MGMT	4405.	74.	4405.	74.	0.	0.
	REGIONAL PRESSURE ESTIMATES:						
		124823.	2156.	122197.	2106.	2626.	50.
5							
	SALMONID STREAM	43367.	835.	37597.	734.	5770.	101.
	SALMONID LAKE	17062.	306.	15480.	274.	1582.	32.
	NONSALMONID STREAM	3676.	83.	3676.	83.	0.	0.
	NONSALMONID LAKE	188.	2.	188.	2.	0.	0.
	UNDESIG STRM MGMT	0.	0.	0.	0.	0.	0.
	UNDESIG LAKE MGMT	1258.	21.	1153.	18.	105.	3.
	REGIONAL PRESSURE ESTIMATES:						
		65551.	1247.	58094.	1111.	7457.	136.

Table 9. Angling pressure in angler days by region by water type for the "winter" season of March '95 through April '95 and October '95 through February '96 (continued)

REG	WATER TYPE	TOTALS PRESSURE	TOTALS TRIPS	RESIDENTS PRESSURE	RESIDENTS TRIPS	NON-RESIDENTS PRESSURE	NON-RESIDENTS TRIPS
6							
	SALMONID STREAM	2690.	47.	2690.	47.	0.	0.
	SALMONID LAKE	9196.	202.	9196.	202.	0.	0.
	NONSALMONID STREAM	4871.	110.	4850.	109.	21.	1.
	NONSALMONID LAKE	17794.	310.	17562.	303.	232.	7.
	UNDESIG STRM MGMT	347.	11.	347.	11.	0.	0.
	UNDESIG LAKE MGMT	1057.	15.	1057.	15.	0.	0.
	REGIONAL PRESSURE ESTIMATES:	35955.	695.	35702.	687.	253.	8.
7							
	SALMONID STREAM	186.	6.	143.	4.	43.	2.
	SALMONID LAKE	3158.	45.	3158.	45.	0.	0.
	NONSALMONID STREAM	7975.	175.	7849.	173.	126.	2.
	NONSALMONID LAKE	5667.	126.	3611.	68.	2056.	58.
	UNDESIG STRM MGMT	253.	8.	253.	8.	0.	0.
	UNDESIG LAKE MGMT	672.	11.	672.	11.	0.	0.
	REGIONAL PRESSURE ESTIMATES:	17911.	371.	15686.	309.	2225.	62.
TOTAL							
	SALMONID STREAM	251961.	4736.	216293.	4094.	35668.	642.
	SALMONID LAKE	225515.	3968.	216652.	3802.	8863.	166.
	NONSALMONID STREAM	20844.	453.	20571.	448.	273.	5.
	NONSALMONID LAKE	33244.	597.	30935.	531.	2309.	66.
	UNDESIG STRM MGMT	1266.	36.	1076.	31.	190.	5.
	UNDESIG LAKE MGMT	9958.	172.	9790.	168.	168.	4.
	STATEWIDE PRESSURE ESTIMATES:	542788.	9962.	495317.	9074.	47471.	888.

Table 10. Angling pressure in angler days by drainage by water type for the 1995 "winter" angling season March '95 through April '95 and October '95 through February '96

DRAIN	WATER TYPE	TOTALS PRESSURE	TOTALS TRIPS	RESIDENTS PRESSURE	RESIDENTS TRIPS	NONRESIDENTS PRESSURE	NONRESIDENTS TRIPS
BEAVERHEAD DR							
	SALMONID STREAM	4634.	80.	3175.	57.	1459.	23.
	SALMONID LAKE	16778.	244.	14631.	215.	2147.	29.
	NONSALMONID STREAM	0.	0.	0.	0.	0.	0.
	NONSALMONID LAKE	0.	0.	0.	0.	0.	0.
	UNDESIG STRM MGMT	0.	0.	0.	0.	0.	0.
	UNDESIG LAKE MGMT	174.	2.	174.	2.	0.	0.
	DRAINAGE PRESSURE ESTIMATES:	21586.	326.	17980.	274.	3606.	52.

Table 10. Angling pressure in angler days by drainage by water type for the 1995 "winter" angling season March '95 through April '95 and October '95 through February '96 (continued)

DRAIN / WATER TYPE	TOTALS PRESSURE	TOTALS TRIPS	RESIDENTS PRESSURE	RESIDENTS TRIPS	NONRESIDENTS PRESSURE	NONRESIDENTS TRIPS
BIG HOLE DR						
SALMONID STREAM	6980.	137.	3903.	88.	3077.	49.
SALMONID LAKE	467.	7.	404.	6.	63.	1.
NONSALMONID STREAM	0.	0.	0.	0.	0.	0.
NONSALMONID LAKE	0.	0.	0.	0.	0.	0.
UNDESIG STRM MGMT	32.	1.	32.	1.	0.	0.
UNDESIG LAKE MGMT	159.	3.	159.	3.	0.	0.
DRAINAGE PRESSURE ESTIMATES:						
	7638.	148.	4498.	98.	3140.	50.
BITTERROOT DR						
SALMONID STREAM	24230.	485.	19410.	394.	4820.	91.
SALMONID LAKE	1535.	36.	1471.	33.	64.	3.
NONSALMONID STREAM	0.	0.	0.	0.	0.	0.
NONSALMONID LAKE	0.	0.	0.	0.	0.	0.
UNDESIG STRM MGMT	0.	0.	0.	0.	0.	0.
UNDESIG LAKE MGMT	193.	5.	193.	5.	0.	0.
DRAINAGE PRESSURE ESTIMATES:						
	25958.	526.	21074.	432.	4884.	94.
BLACKFOOT DR						
SALMONID STREAM	6803.	120.	6297.	104.	506.	16.
SALMONID LAKE	6940.	117.	6464.	110.	476.	7.
NONSALMONID STREAM	0.	0.	0.	0.	0.	0.
NONSALMONID LAKE	0.	0.	0.	0.	0.	0.
UNDESIG STRM MGMT	0.	0.	0.	0.	0.	0.
UNDESIG LAKE MGMT	148.	2.	85.	1.	63.	1.
DRAINAGE PRESSURE ESTIMATES:						
	13891.	239.	12846.	215.	1045.	24.
LOWER CLARK FORK DR						
SALMONID STREAM	28950.	619.	26010.	535.	2940.	84.
SALMONID LAKE	4998.	92.	4998.	92.	0.	0.
NONSALMONID STREAM	0.	0.	0.	0.	0.	0.
NONSALMONID LAKE	0.	0.	0.	0.	0.	0.
UNDESIG STRM MGMT	63.	2.	63.	2.	0.	0.
UNDESIG LAKE MGMT	414.	5.	414.	5.	0.	0.
DRAINAGE PRESSURE ESTIMATES:						
	34425.	718.	31485.	634.	2940.	84.
UPPER CLARK FORK DR						
SALMONID STREAM	14605.	305.	11089.	224.	3516.	81.
SALMONID LAKE	15307.	232.	14433.	221.	874.	11.
NONSALMONID STREAM	0.	0.	0.	0.	0.	0.
NONSALMONID LAKE	0.	0.	0.	0.	0.	0.
UNDESIG STRM MGMT	0.	0.	0.	0.	0.	0.
UNDESIG LAKE MGMT	515.	13.	515.	13.	0.	0.
DRAINAGE PRESSURE ESTIMATES:						
	30427.	550.	26037.	458.	4390.	92.

Table 10. Angling pressure in angler days by drainage by water type for the 1995 "winter" angling season March '95 through April '95 and October '95 through February '96 (continued)

DRAIN	WATER TYPE	TOTALS PRESSURE	TOTALS TRIPS	RESIDENTS PRESSURE	RESIDENTS TRIPS	NONRESIDENTS PRESSURE	NONRESIDENTS TRIPS
LOWER FLATHEAD DR							
	SALMONID STREAM	11235.	167.	10588.	158.	647.	9.
	SALMONID LAKE	28269.	458.	26495.	425.	1774.	33.
	NONSALMONID STREAM	0.	0.	0.	0.	0.	0.
	NONSALMONID LAKE	2924.	56.	2903.	55.	21.	1.
	UNDESIG STRM MGMT	246.	5.	246.	5.	0.	0.
	UNDESIG LAKE MGMT	808.	18.	808.	18.	0.	0.
	DRAINAGE PRESSURE ESTIMATES:	43482.	704.	41040.	661.	2442.	43.
UPPER FLATHEAD DR							
	SALMONID STREAM	1425.	30.	1299.	28.	126.	2.
	SALMONID LAKE	5815.	90.	5794.	89.	21.	1.
	NONSALMONID STREAM	0.	0.	0.	0.	0.	0.
	NONSALMONID LAKE	0.	0.	0.	0.	0.	0.
	UNDESIG STRM MGMT	40.	1.	40.	1.	0.	0.
	UNDESIG LAKE MGMT	83.	1.	83.	1.	0.	0.
	DRAINAGE PRESSURE ESTIMATES:	7363.	122.	7216.	119.	147.	3.
GALLATIN DR							
	SALMONID STREAM	17744.	340.	14758.	296.	2986.	44.
	SALMONID LAKE	1720.	36.	1720.	36.	0.	0.
	NONSALMONID STREAM	0.	0.	0.	0.	0.	0.
	NONSALMONID LAKE	0.	0.	0.	0.	0.	0.
	UNDESIG STRM MGMT	0.	0.	0.	0.	0.	0.
	UNDESIG LAKE MGMT	0.	0.	0.	0.	0.	0.
	DRAINAGE PRESSURE ESTIMATES:	19464.	376.	16478.	332.	2986.	44.
JEFFERSON DR							
	SALMONID STREAM	3454.	73.	3411.	71.	43.	2.
	SALMONID LAKE	4486.	67.	4486.	67.	0.	0.
	NONSALMONID STREAM	0.	0.	0.	0.	0.	0.
	NONSALMONID LAKE	0.	0.	0.	0.	0.	0.
	UNDESIG STRM MGMT	0.	0.	0.	0.	0.	0.
	UNDESIG LAKE MGMT	40.	1.	40.	1.	0.	0.
	DRAINAGE PRESSURE ESTIMATES:	7980.	141.	7937.	139.	43.	2.
KOOTENAI DR							
	SALMONID STREAM	5012.	81.	3337.	61.	1675.	20.
	SALMONID LAKE	7343.	151.	7258.	147.	85.	4.
	NONSALMONID STREAM	0.	0.	0.	0.	0.	0.
	NONSALMONID LAKE	83.	1.	83.	1.	0.	0.
	UNDESIG STRM MGMT	0.	0.	0.	0.	0.	0.
	UNDESIG LAKE MGMT	0.	0.	0.	0.	0.	0.
	DRAINAGE PRESSURE ESTIMATES:	12438.	233.	10678.	209.	1760.	24.

Table 10. Angling pressure in angler days by drainage by water type for the 1995 "winter" angling season March '95 through April '95 and October '95 through February '96

DRAIN / WATER TYPE	TOTALS PRESSURE	TOTALS TRIPS	RESIDENTS PRESSURE	RESIDENTS TRIPS	NONRESIDENTS PRESSURE	NONRESIDENTS TRIPS
LITTLE MISSOURI DR						
SALMONID STREAM	0.	0.	0.	0.	0.	0.
SALMONID LAKE	668.	19.	668.	19.	0.	0.
NONSALMONID STREAM	40.	1.	40.	1.	0.	0.
NONSALMONID LAKE	80.	2.	80.	2.	0.	0.
UNDESIG STRM MGMT	0.	0.	0.	0.	0.	0.
UNDESIG LAKE MGMT	0.	0.	0.	0.	0.	0.
DRAINAGE PRESSURE ESTIMATES:	788.	22.	788.	22.	0.	0.
MADISON DR						
SALMONID STREAM	14555.	265.	10544.	217.	4011.	48.
SALMONID LAKE	3811.	70.	2950.	55.	861.	15.
NONSALMONID STREAM	0.	0.	0.	0.	0.	0.
NONSALMONID LAKE	0.	0.	0.	0.	0.	0.
UNDESIG STRM MGMT	0.	0.	0.	0.	0.	0.
UNDESIG LAKE MGMT	32.	1.	32.	1.	0.	0.
DRAINAGE PRESSURE ESTIMATES:	18398.	336.	13526.	273.	4872.	63.
MARIAS DR						
SALMONID STREAM	1470.	18.	1470.	18.	0.	0.
SALMONID LAKE	14248.	245.	14184.	242.	64.	3.
NONSALMONID STREAM	737.	19.	737.	19.	0.	0.
NONSALMONID LAKE	2353.	36.	2353.	36.	0.	0.
UNDESIG STRM MGMT	0.	0.	0.	0.	0.	0.
UNDESIG LAKE MGMT	367.	6.	367.	6.	0.	0.
DRAINAGE PRESSURE ESTIMATES:	19175.	324.	19111.	321.	64.	3.
MILK DR						
SALMONID STREAM	2390.	40.	2390.	40.	0.	0.
SALMONID LAKE	7936.	184.	7936.	184.	0.	0.
NONSALMONID STREAM	927.	16.	927.	16.	0.	0.
NONSALMONID LAKE	4300.	67.	4300.	67.	0.	0.
UNDESIG STRM MGMT	189.	6.	189.	6.	0.	0.
UNDESIG LAKE MGMT	1299.	18.	1299.	18.	0.	0.
DRAINAGE PRESSURE ESTIMATES:	17041.	331.	17041.	331.	0.	0.
LOWER MISSOURI DR						
SALMONID STREAM	6426.	91.	6363.	90.	63.	1.
SALMONID LAKE	6309.	108.	6309.	108.	0.	0.
NONSALMONID STREAM	5767.	122.	5620.	119.	147.	3.
NONSALMONID LAKE	13494.	243.	13262.	236.	232.	7.
UNDESIG STRM MGMT	411.	13.	411.	13.	0.	0.
UNDESIG LAKE MGMT	1371.	17.	1371.	17.	0.	0.
DRAINAGE PRESSURE ESTIMATES:	33778.	594.	33336.	583.	442.	11.

Table 10. Angling pressure in angler days by drainage by water type for the 1995 "winter" angling season March '95 through April '95 and October '95 through February '96

DRAIN / WATER TYPE	TOTALS PRESSURE	TOTALS TRIPS	RESIDENTS PRESSURE	RESIDENTS TRIPS	NONRESIDENTS PRESSURE	NONRESIDENTS TRIPS
UPPER MISSOURI DR						
SALMONID STREAM	41374.	713.	39429.	680.	1945.	33.
SALMONID LAKE	67302.	1261.	66450.	1234.	852.	27.
NONSALMONID STREAM	1762.	38.	1762.	38.	0.	0.
NONSALMONID LAKE	0.	0.	0.	0.	0.	0.
UNDESIG STRM MGMT	0.	0.	0.	0.	0.	0.
UNDESIG LAKE MGMT	1871.	40.	1871.	40.	0.	0.
DRAINAGE PRESSURE ESTIMATES:	112309.	2052.	109512.	1992.	2797.	60.
MUSSELSHELL DR						
SALMONID STREAM	2293.	39.	2293.	39.	0.	0.
SALMONID LAKE	7050.	134.	7007.	132.	43.	2.
NONSALMONID STREAM	0.	0.	0.	0.	0.	0.
NONSALMONID LAKE	3804.	59.	3804.	59.	0.	0.
UNDESIG STRM MGMT	0.	0.	0.	0.	0.	0.
UNDESIG LAKE MGMT	1323.	18.	1323.	18.	0.	0.
DRAINAGE PRESSURE ESTIMATES:	14470.	250.	14427.	248.	43.	2.
ST MARY DR						
SALMONID STREAM	0.	0.	0.	0.	0.	0.
SALMONID LAKE	1154.	20.	1154.	20.	0.	0.
NONSALMONID STREAM	0.	0.	0.	0.	0.	0.
NONSALMONID LAKE	170.	2.	170.	2.	0.	0.
UNDESIG STRM MGMT	0.	0.	0.	0.	0.	0.
UNDESIG LAKE MGMT	0.	0.	0.	0.	0.	0.
DRAINAGE PRESSURE ESTIMATES:	1324.	22.	1324.	22.	0.	0.
SUN DR						
SALMONID STREAM	1419.	24.	1398.	23.	21.	1.
SALMONID LAKE	4665.	79.	4665.	79.	0.	0.
NONSALMONID STREAM	0.	0.	0.	0.	0.	0.
NONSALMONID LAKE	261.	5.	261.	5.	0.	0.
UNDESIG STRM MGMT	95.	3.	95.	3.	0.	0.
UNDESIG LAKE MGMT	397.	6.	397.	6.	0.	0.
DRAINAGE PRESSURE ESTIMATES:	6837.	117.	6816.	116.	21.	1.
LOWER YELLOWSTONE DR						
SALMONID STREAM	186.	6.	143.	4.	43.	2.
SALMONID LAKE	2490.	26.	2490.	26.	0.	0.
NONSALMONID STREAM	7935.	174.	7809.	172.	126.	2.
NONSALMONID LAKE	5587.	124.	3531.	66.	2056.	58.
UNDESIG STRM MGMT	0.	0.	0.	0.	0.	0.
UNDESIG LAKE MGMT	466.	8.	466.	8.	0.	0.
DRAINAGE PRESSURE ESTIMATES:	16664.	338.	14439.	276.	2225.	62.

Table 10. Angling pressure in angler days by drainage by water type for the 1995 "winter" angling season March '95 through April '95 and October '95 through February '96 (continued)

DRAIN	WATER TYPE	TOTALS PRESSURE	TOTALS TRIPS	RESIDENTS PRESSURE	RESIDENTS TRIPS	NONRESIDENTS PRESSURE	NONRESIDENTS TRIPS
UPPER YELLOWSTONE DR							
	SALMONID STREAM	56776.	1103.	48986.	967.	7790.	136.
	SALMONID LAKE	16224.	292.	14685.	262.	1539.	30.
	NONSALMONID STREAM	3676.	83.	3676.	83.	0.	0.
	NONSALMONID LAKE	188.	2.	188.	2.	0.	0.
	UNDESIG STRM MGMT	64.	3.	0.	0.	64.	3.
	UNDESIG LAKE MGMT	298.	8.	193.	5.	105.	3.
	DRAINAGE PRESSURE ESTIMATES:	77226.	1491.	67728.	1319.	9498.	172.
TOTAL							
	SALMONID STREAM	251961.	4736.	216293.	4094.	35668.	642.
	SALMONID LAKE	225515.	3968.	216652.	3802.	8863.	166.
	NONSALMONID STREAM	20844.	453.	20571.	448.	273.	5.
	NONSALMONID LAKE	33244.	597.	30935.	531.	2309.	66.
	UNDESIG STRM MGMT	1266.	36.	1076.	31.	190.	5.
	UNDESIG LAKE MGMT	9958.	172.	9790.	168.	168.	4.
	STATEWIDE PRESSURE ESTIMATES:	542788.	9962.	495317.	9074.	47471.	888.

DISCUSSION

SCOPE OF ANGLING PRESSURE

The statewide angling pressure survey was conducted from March, 1995 through February, 1996. Estimates of pressure by residents and nonresidents were for licensed anglers only. This would encompass anglers 12 years of age and older. Spence (1971) found that the unlicensed angler (ages 2- 14) comprised 9% of the pressure on Rock Creek near Missoula. Peterson (1970) found that the unlicensed angler accounted for 21% and 19% of the total number of anglers on Big Spring Creek near Lewistown during 1968 and 1969 respectively. On the Bighorn River near Hardin, Stevenson (1975) found that the unlicensed angler accounted for 14.2% and 15.8% of the total number of anglers during 1972 and 1973 respectively. Fredenberg (1984) found that 10% of the anglers on Bighorn Lake and 13% of the anglers on the Yellowtail Afterbay were unlicensed. The 1975 National Fishing and Hunting Survey showed that 23.8% of the anglers nationwide were between the ages of 9 and 17. It appears that the unlicensed angler makes up between 9% to 21% of the fishing pressure depending on the type of water being fished.

Some angling pressure was obtained on Indian reservations and National Parks within Montana. This pressure was incidental to other fishing trips and only included those anglers that had purchased a Montana fishing license. Since national parks and reservations require different licensing, a complete pressure estimate of waters within those regions was not obtained.

ACCURACY

SAMPLING

Samples were drawn and questionnaires sent to the selected anglers as soon as possible. This was usually 15-20 days after the wave being sampled had ended (see discussion under Methods for details). Since license dealers are not required to remit copies of licenses sold until the 10th of the following month, the samples may not contain all the eligible anglers for a given period. The months of April through September are most affected by this procedure, since license sales naturally curtail after September. This means of obtaining a sample may skew the pressure if license dealers from a given area don't remit their licenses in a timely manner. At the present time, there is no way to estimate the extent, if any, of this bias.

PRESSURE

No significant difference was found between the survey results and on-site creel census for rivers for the statewide angling mail surveys conducted from 1982 through 1985 (McFarland, 1989). When both surveys were conducted simultaneously on lakes and reservoirs, the results again agreed (McFarland, 1989). The same methodology was used in this survey as was used in those conducted from 1982

through 1985 and in 1989 (McFarland, 1991). At the time this report was written, no published results were available for creel census conducted during the same time frame so no direct comparisons could be made.

RETURN RATES

Return rates (# of respondents / [# of surveys sent - nondeliverables] * 100) were calculated for every wave by residency. Return rates were calculated with and without the follow-up phone calls of resident non-respondents (Table 11). The average total return rates for residents and nonresidents was 61.1% and 56.0% respectively. Nonresident return rates for season license holders was 63.6% and was less for 2-day license buyers at 56.0%. Without the telephone calls the overall resident response rate was 60.4%. No phone calls were made to nonresident season license holders so the return rate remained the same.

Table 11. Return rates by residency with and without phone follow-ups for the 1995 statewide angling survey.

	Total Return Rates		Return Rates w/o Phone	
WAVE	Resident	Nonresident	Resident	Nonresident*
1	70.2	80.0	70.2	80.0
2	61.8	62.8	59.8	62.8
3	59.0	56.5	58.0	56.5
4	57.8	58.9	56.7	58.9
5	57.6	64.9	56.7	64.9
6	56.1	48.8	55.0	48.8
7	60.8	65.0	60.5	65.0
8	65.4	71.5	65.2	71.5
9	67.8	76.2	67.3	76.2
10	66.2	74.4	66.1	74.4
11	66.3	67.9	66.3	67.9
12	63.0	69.6	63.0	69.6
99		51.5		51.5

* Nonresident season license non-respondents were not telephoned.

NON-RESPONSE BIAS

Telephone calls were made to a random sample of non-respondents to ascertain if the percent fishing was different from those who responded to the mail survey. The average phone respondent was no more likely to have fished than mail respondents (paired t-value= 1.686, 7 d.f. p-value = .15). No phone calls were made for waves 1, 10, 11, and 12 due to budgetary constraints. For the months of April, and August, the mail respondents were more likely to go fishing than the phone respondents. During the other months the reverse was true.

NUMBER OF LICENSED ANGLERS VS PRESSURE

The number of resident anglers has increased for the period 1982 to 1985 and then decreased until 1989 and then continued to steadily increase (Table 12). The number of nonresident anglers

during this same period decreased initially and then increased so that overall, the total number of anglers remained fairly static until 1993. In 1994 there was a 5.4% increase from the previous year in the total number of licensed anglers in Montana. The number of licensed anglers then dropped for both residents and nonresidents for the 1995 license year but was still above the number of licensed anglers for 1993.

Table 12. Number of licensed anglers from 1982 through 1993 by residency.

Year	Resident Anglers	Nonresident Anglers
1982	216,689	119,293
1983	217,483	116,875
1984	232,485	102,843
1985	236,455	106,304
1986	235,403	100,456
1987	233,111	103,936
1988	219,299	108,471
1989	216,412	114,254
1990	217,370	119,611
1991	221,723	138,243
1992	222,186	134,212
1993	226,992	151,192
1994	233,630	164,841
1995	227.849	153,887

Comparing statewide angling use from the mail survey versus number of anglers shows some correlation for residents in the recent years (1989-1995), while nonresidents seem to have some association between number of anglers and the amount of use exerted (Charts 5 & 6) with the exception of 1991. In 1991 the number of nonresident anglers increased while the pressure exerted by nonresidents decreased.

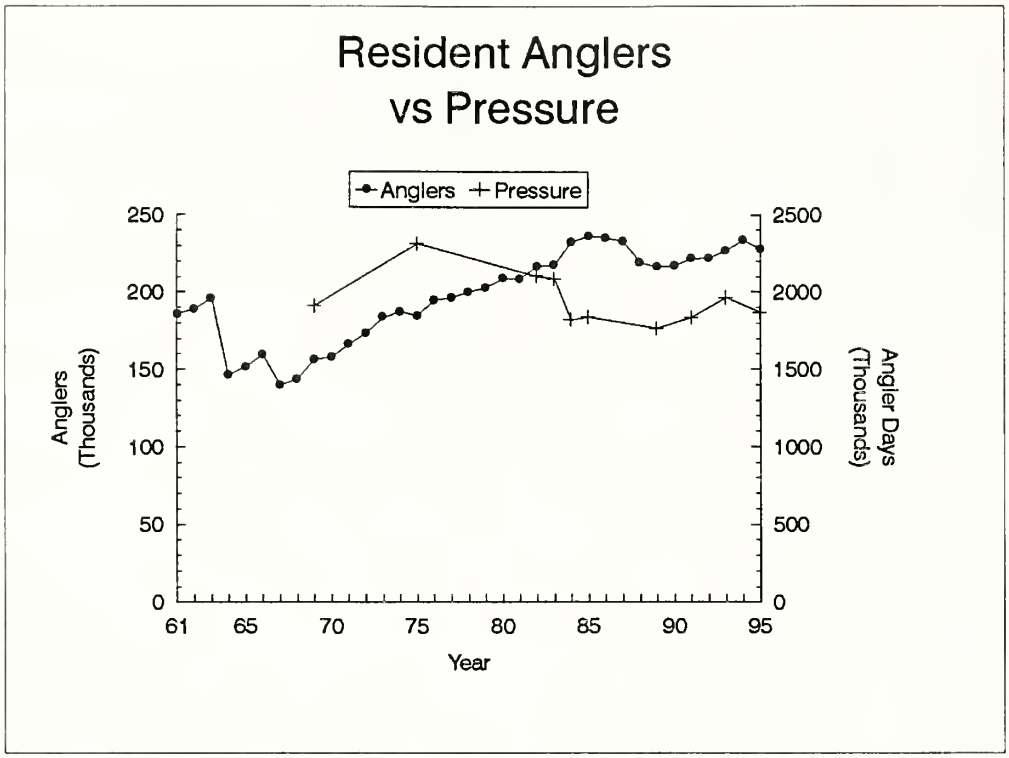

Chart 5. Angling pressure versus number of anglers for residents from 1961 to 1995.

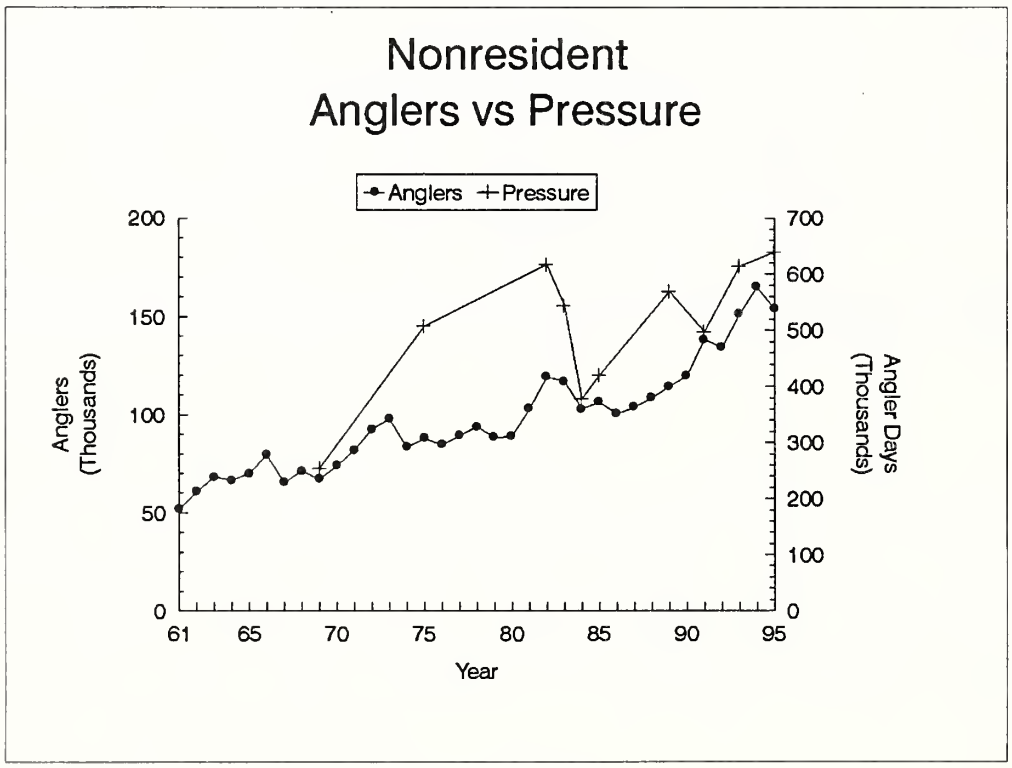

Chart 6. Angling pressure versus number of anglers for nonresidents from 1961 to 1995.

CONCLUSIONS AND RECOMMENDATIONS

The statewide angling pressure mail survey continues to provide invaluable data on individual bodies of water as well as statewide estimates.

Nonresident big game license holders need to be sampled to see if the rate of fishing has changed within this segment of the angling public.

It is recommended that the survey continue to be conducted every other year. This will provide long term trend data.

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APPENDIX A

Examples of questionnaires

Montana Fish, Wildlife & Parks

please return bottom portion

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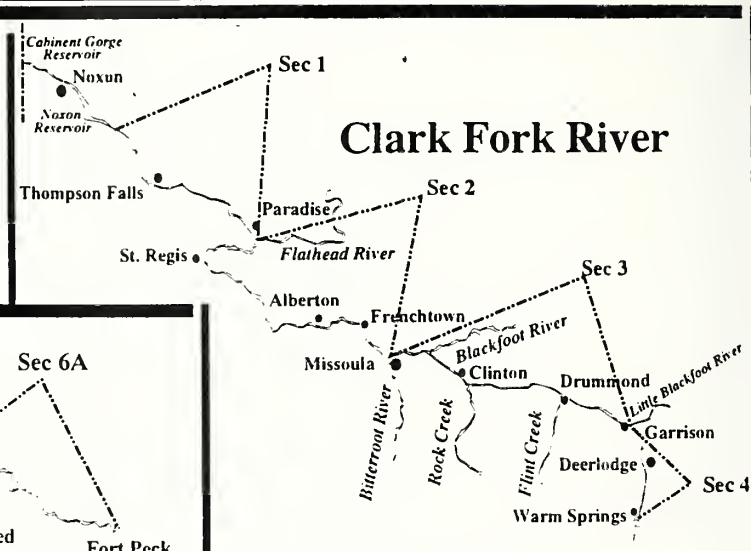
WE NEED INFORMATION ON ALL WATERS FISHED IN MONTANA NOT JUST THE WATERS INCLUDED ON THIS PAGE.

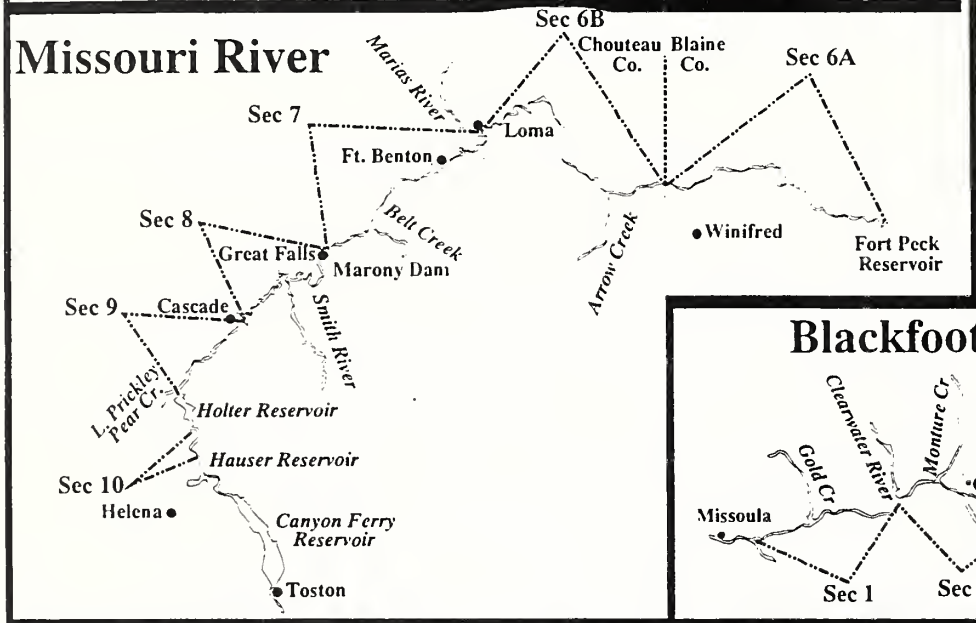
SPECIFIC SECTIONS OF MONTANA WATERS THAT ARE DIFFICULT TO IDENTIFY

We need information on all waters fished in Montana not just the waters included on this page. If you fished one of the rivers indicated on a map, please enter the specific section number in the appropriate space on the questionnaire form. For waters other than those indicated on a map, this includes the Flathead, Milk River, eastern sections of the Missouri and Yellowstone, etc., please be very specific as to the name of the lake, stream, or reservoir and the nearest town, point of access, or landmark to facilitate identification.

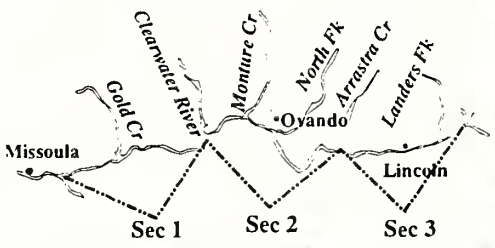
Clark Fork River



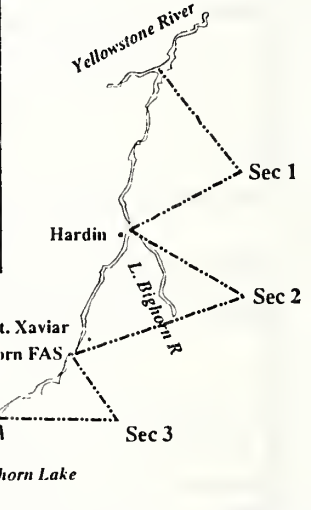
Missouri River



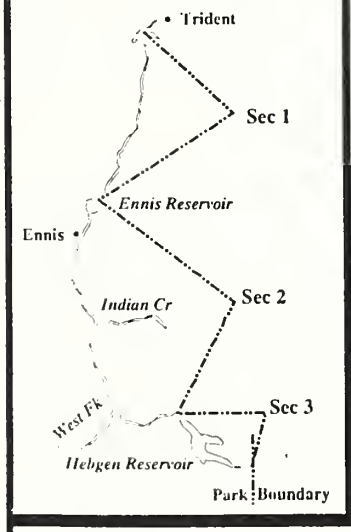
Blackfoot River



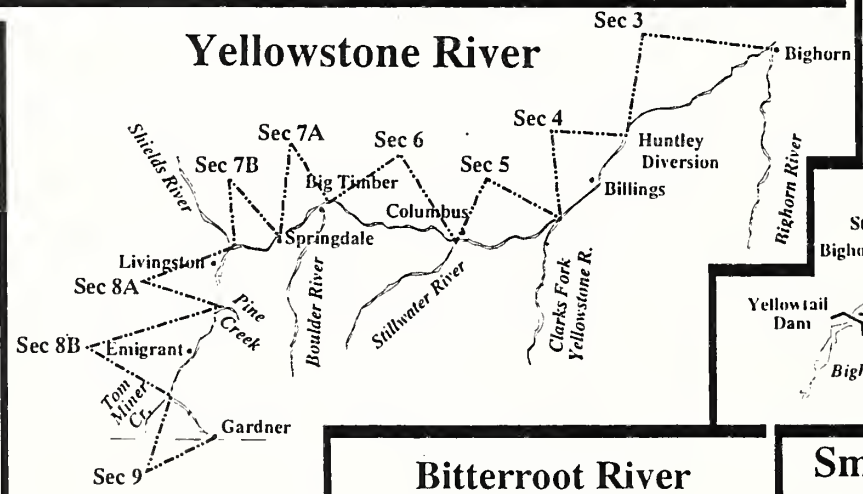
Bighorn River



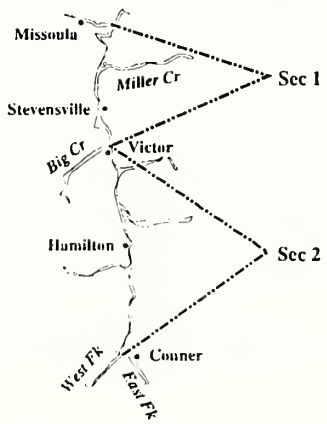
Madison River



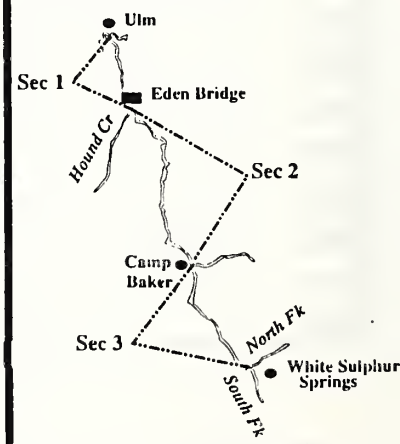
Yellowstone River



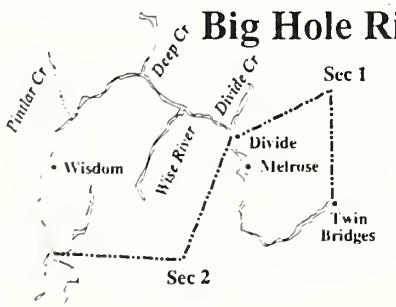
Bitterroot River



Smith River



Big Hole River



Montana Fish, Wildlife & Parks

please return bottom portion

- - - -

WE NEED INFORMATION ON ALL WATERS FISHED IN MONTANA NOT JUST THE WATERS INCLUDED ON THIS PAGE.

SPECIFIC SECTIONS OF MONTANA WATERS THAT ARE DIFFICULT TO IDENTIFY

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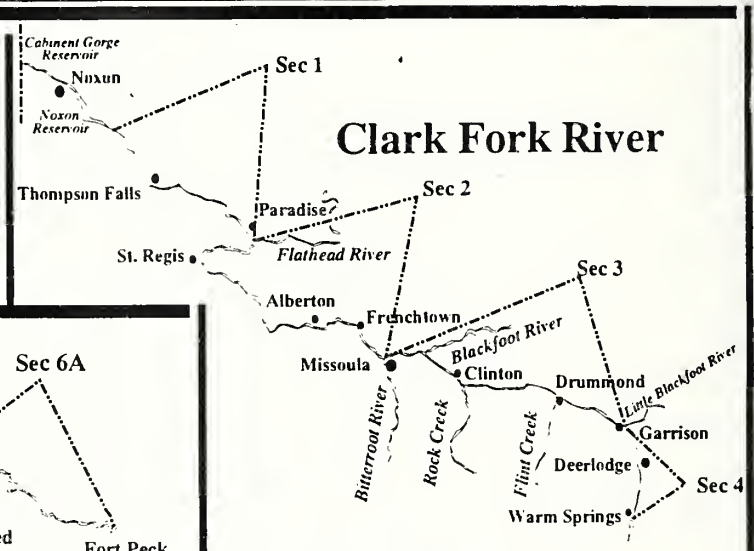

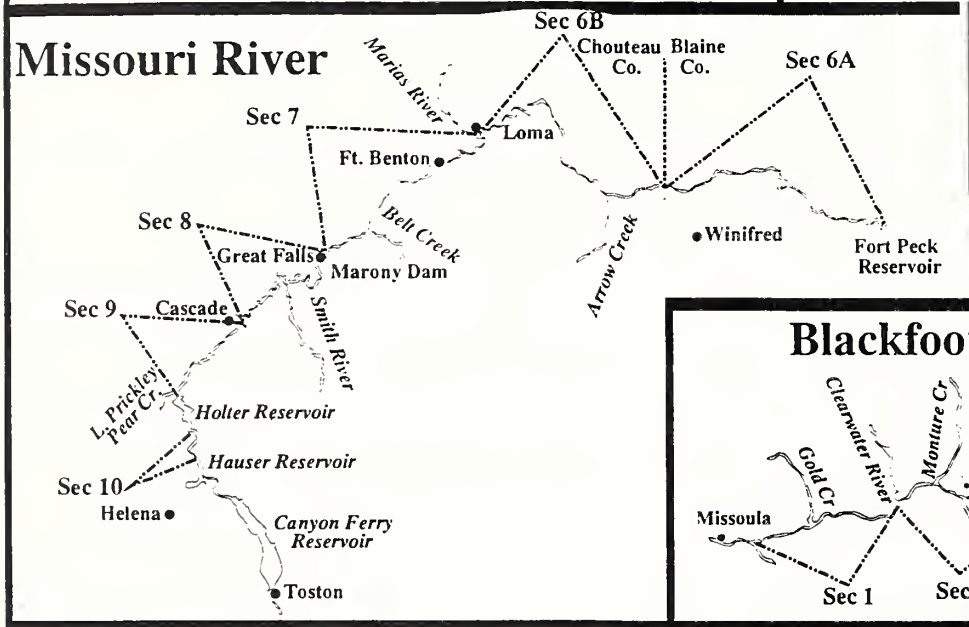

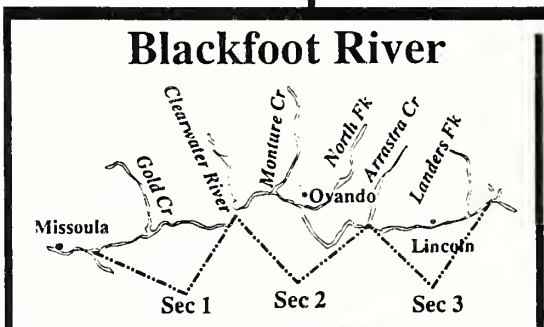

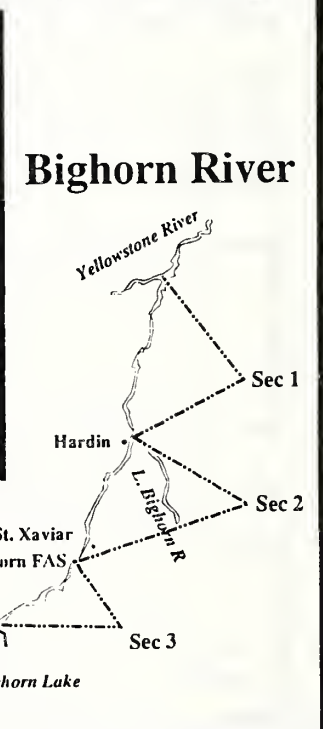

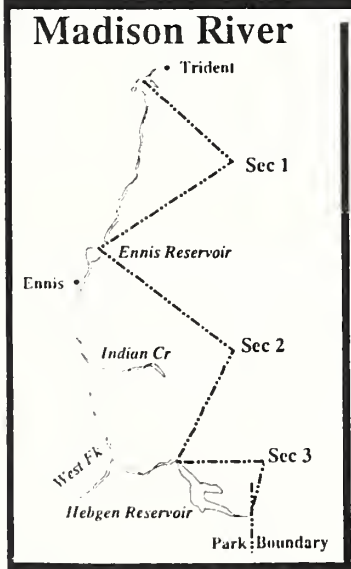

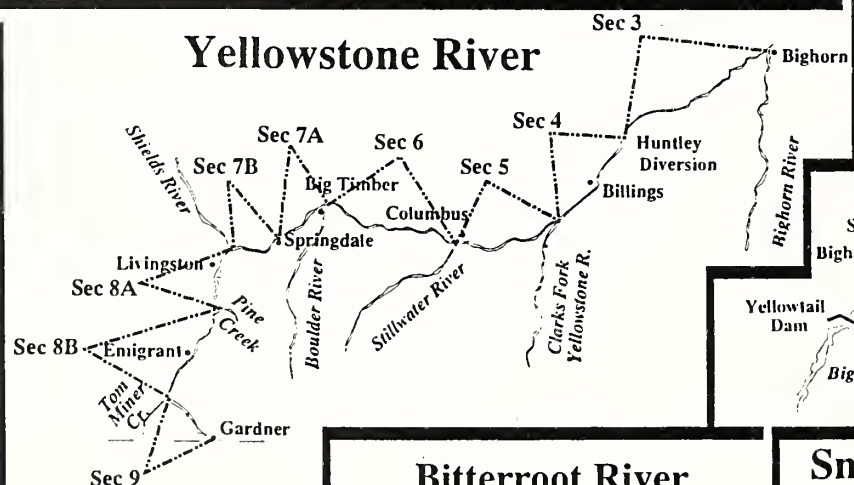

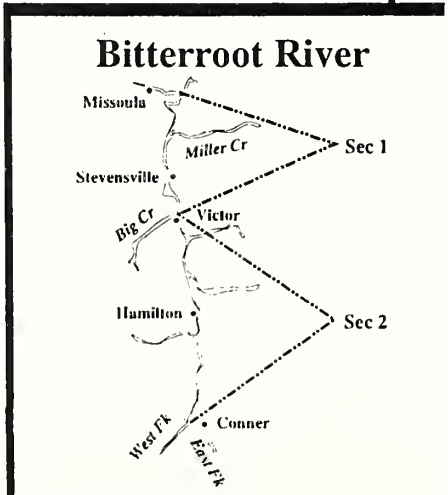

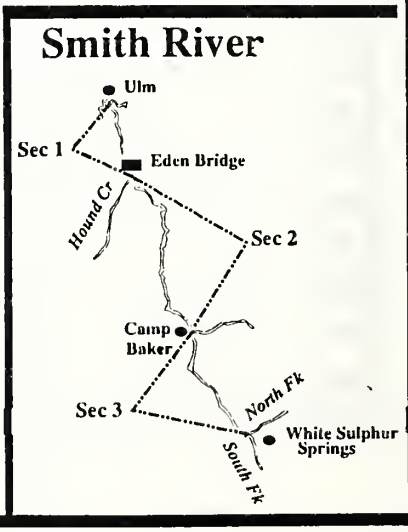

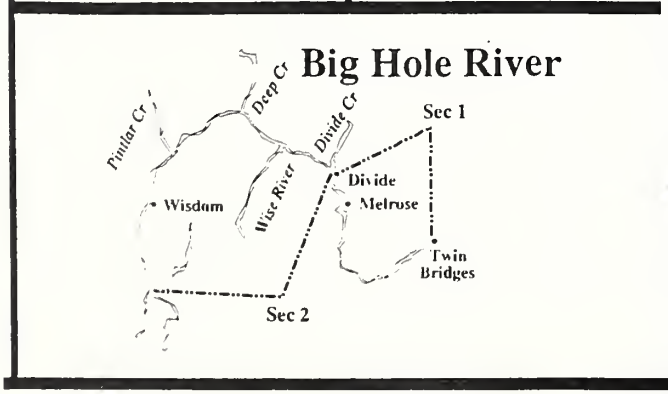

Montana Fish, Wildlife & Parks

Please return bottom portion

Dear Angler,

We are conducting a monthly survey sent to a random sample of fishing license holders. This survey provides important data to help determine fishing pressure on the lakes and streams of Montana. By providing us with this vital information, you will be assisting us in properly managing Montana's fish population.

This survey requests only YOUR fishing activities. Include ALL waters fished in Montana for the time indicated. If you fished one of the streams on the back of this form, please include the section number to aid us in identifying the portion of the stream. All information you provide will be held in strict confidence. We appreciate your continued cooperation in returning this survey at your earliest convenience.

****EVEN IF YOU DID NOT FISH OR CATCH ANY FISH, PLEASE FILL OUT AND RETURN THIS QUESTIONNAIRE.****

Did you purchase a license to hunt in Montana between March 1, 1995 and February 29, 1996?

☐ YES ☐ No

Did you purchase a license to fish in Montana between March 1, 1995 and February 29, 1996?

☐ YES - If yes, total number of days fished _____?

Type of license purchased: ☐ Non-Resident Season

☐ 2-day--How many did you purchase for only your use? ____

Enter EACH WATER FISHED IN MONTANA during this time period on a separate line below.

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Date Fished	Name of Lake or Stream Fished	Section # (See back)	Nearest Town or County	Days Fished	Was this water your 2nd choice because your 1st choice has Whirling Disease? (Y or N)	Was Primary Purpose of Trip To Fish? (Y or N)	Round Trip Miles To Fish

Thank you for your consideration.

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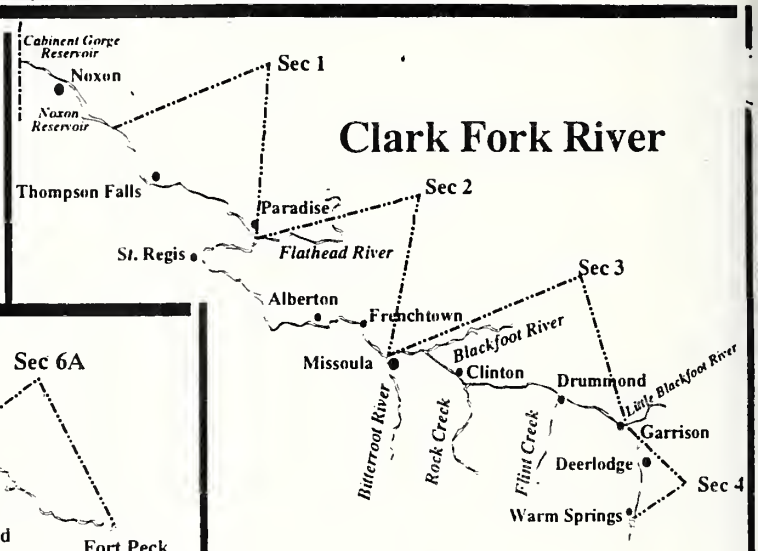
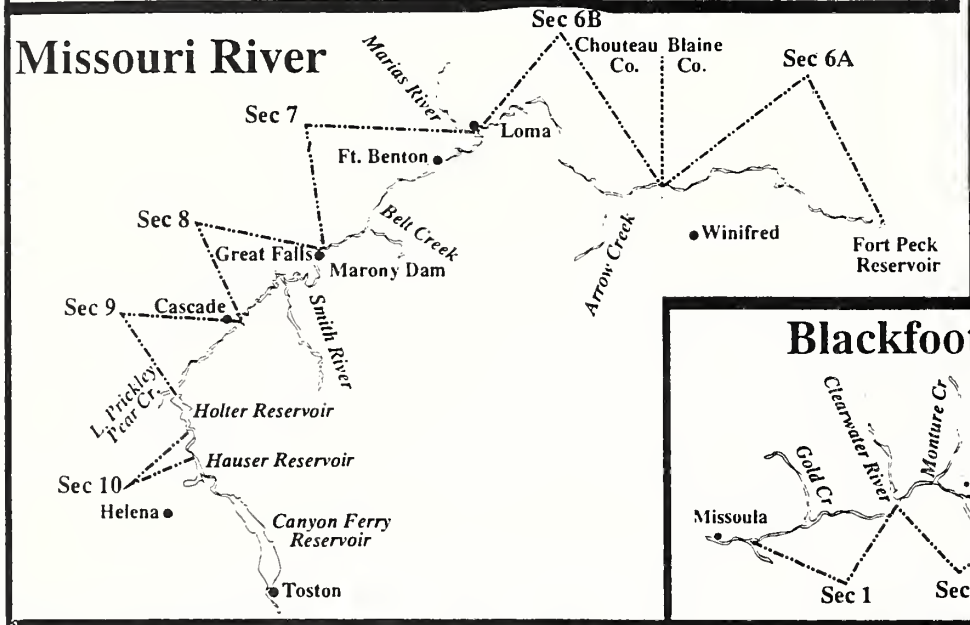
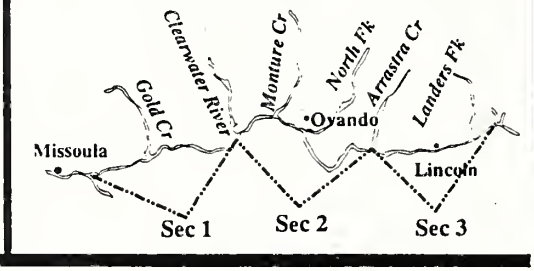
Clark Fork River



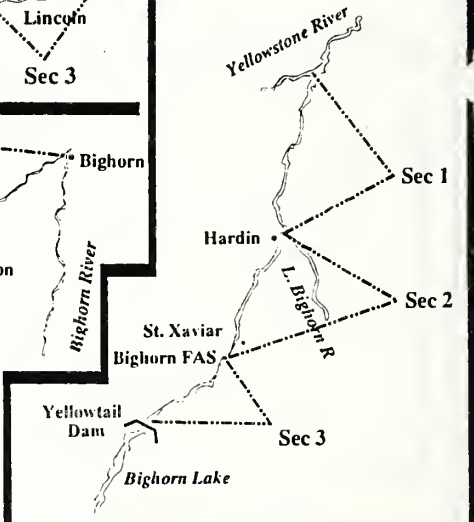
Missouri River



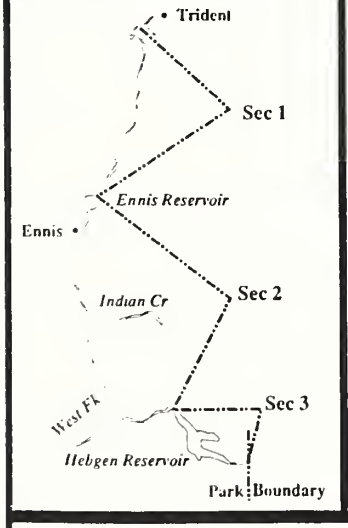
Blackfoot River



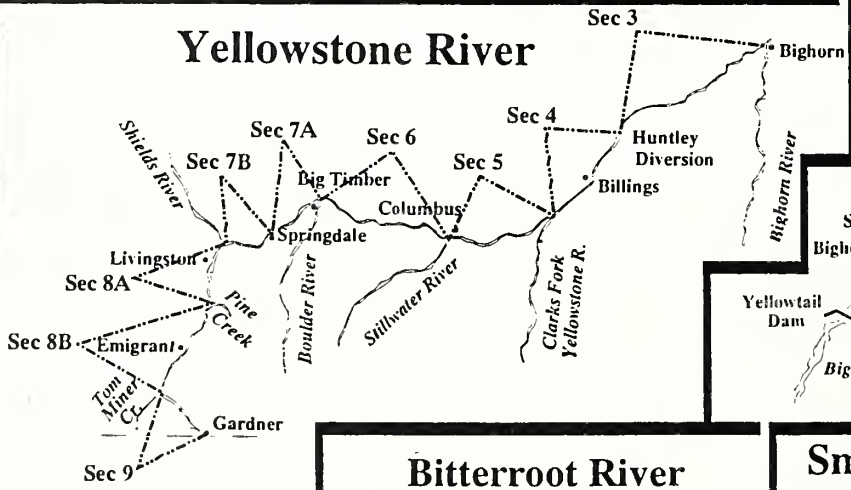
Bighorn River



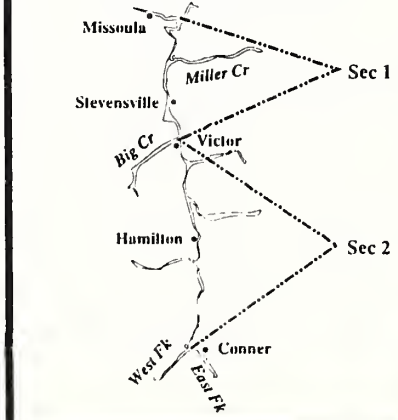
Madison River



Yellowstone River



Bitterroot River



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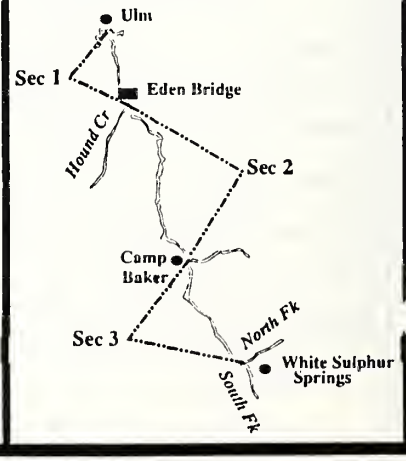

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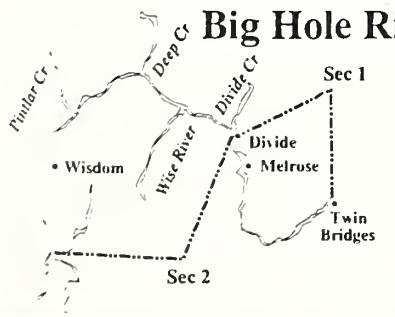

Montana Fish, Wildlife & Parks

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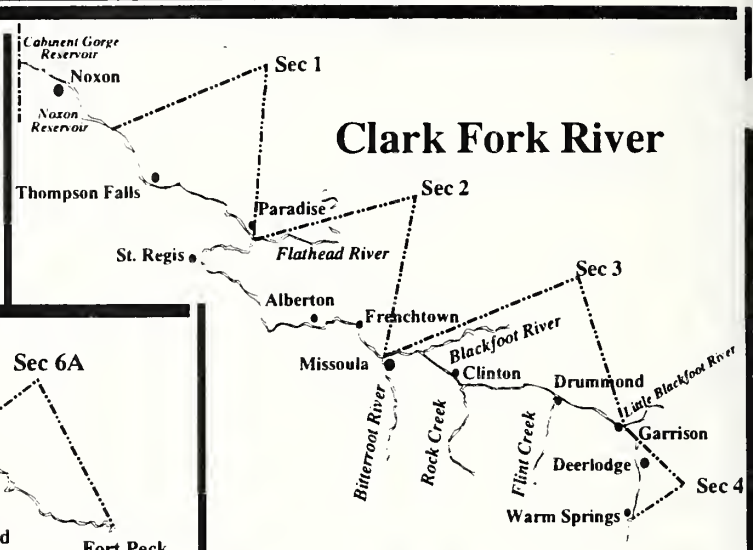

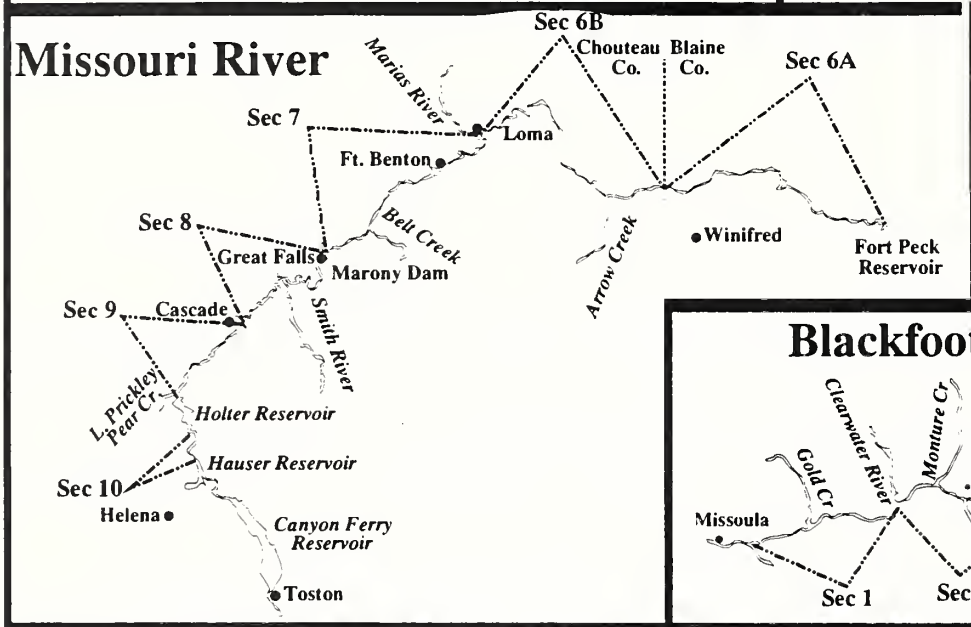

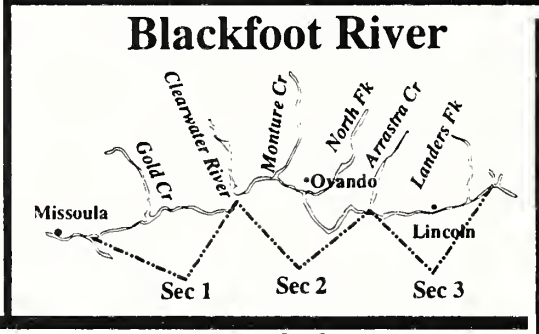

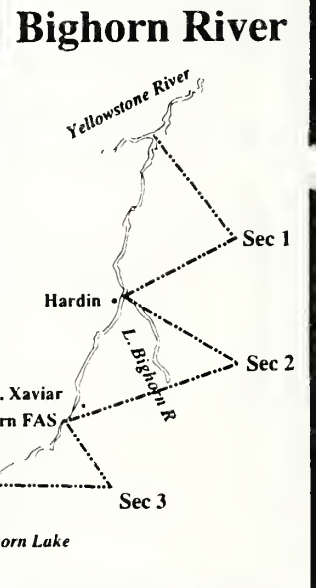

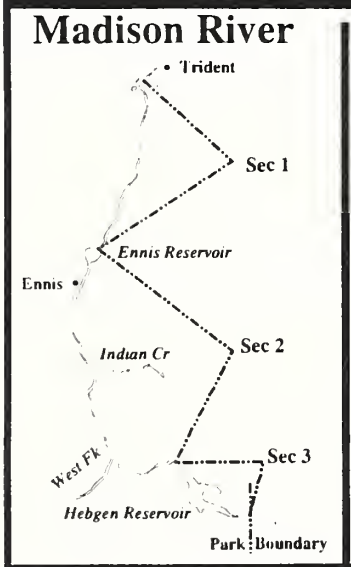

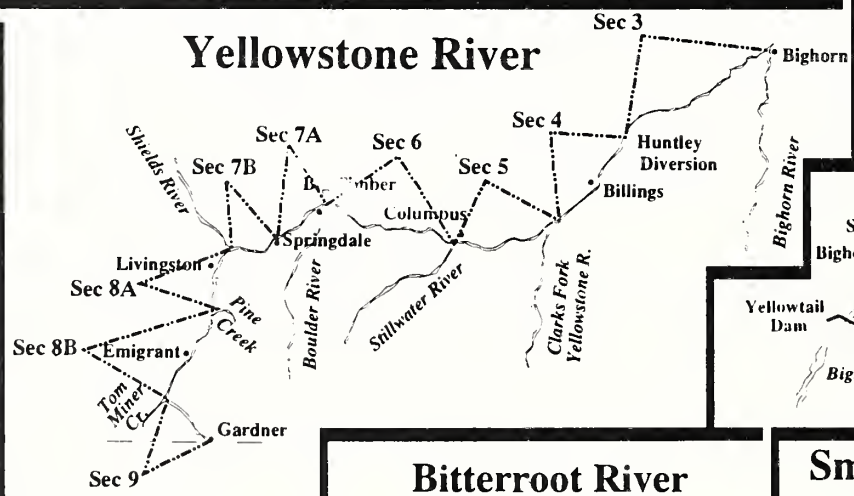

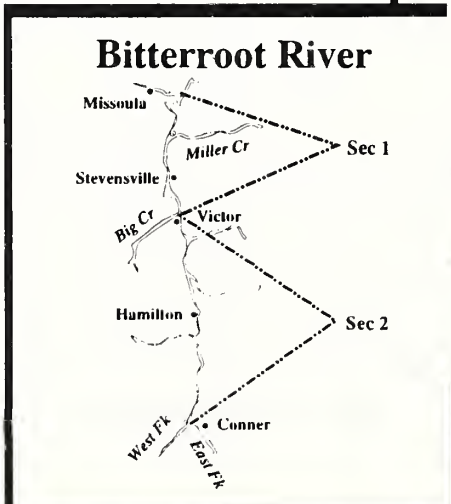

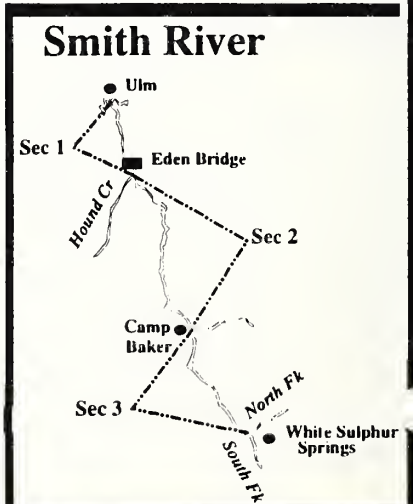

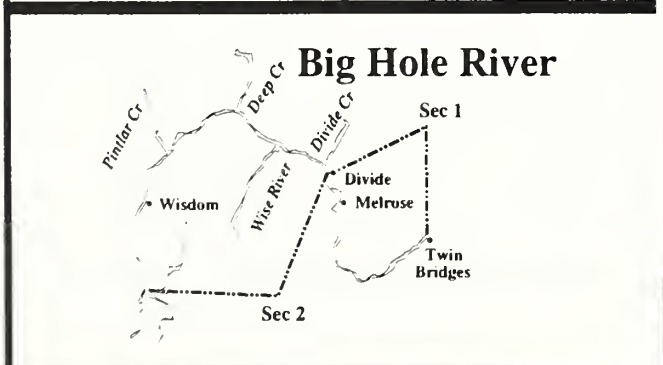

APPENDIX B
Boundaries of waters broken into sections

STREAM NAME		WATER CODE	DOWNSTREAM POINT	UPSTREAM POINT
BEAVER CREEK	SEC 01	15-0280	MOUTH	BEAVER CREEK RES.
	SEC 02	15-0320	BEAVER CREEK RES	BEAR PAW LAKE
	SEC 03	15-0340	BEAR PAW LAKE	ROCKY BOY INDIAN R
	SEC 04	15-0360	ROCKY BOY INDIAN RES	HEADWATERS
BIG HOLE R.	SEC 01	02-0425	MOUTH	DIVIDE CREEK
	SEC 02	02-0450	DIVIDE CREEK	PINTLAR CREEK
	SEC 03	02-0475	PINTLAR CREEK	HEADWATERS
BIG SPRING CR.	SEC 01	16-0301	JUDITH RIVER (MOUTH)	COTTONWOOD CREEK
	SEC 02	16-0310	COTTONWOOD CREEK	HEADWATERS
BIGHORN RIVER	SEC 01	22-0490	MOUTH	LITTLE BIGHORN RIVER
	SEC 02	22-0495	L.BIGHORN R	BIG HORN FAS(ACCESS CR)
	SEC 03	22-0496	(ACCESS CR.)BH-FAS	AFTERBAY
BITTERROOT R.	SEC 01	03-0475	MOUTH	BIG CREEK
	SEC 02	03-0500	BIG CREEK	HEADWATERS
BLACKFOOT R.	SEC 01	04-0600	MOUTH	CLEARWATER RIVER
	SEC 02	04-0630	CLEARWATER RIVER	ARRASTRA CREEK
	SEC 03	04-0660	ARRASTRA CREEK	HEADWATERS
BOULDER RIVER	SEC 01	22-0742	MOUTH	BOULDER FALLS(NAT BRDG)
	SEC 02	22-0756	NATURAL BRIDGE	HEADWATERS
	SEC 03	22-0770	BRIDGE CREEK	HEADWATERS
CLARK FORK R.	SEC 01	05-1440	IDAHO BORDER	FLATHEAD RIVER
	SEC 02	05-1456	FLATHEAD RIVER	BITTERROOT RIVER
	SEC 03	06-1121	BITTERROOT R	LITTLE BLACKFOOT R
	SEC 04	06-1140	LITTLE BLACKFOOT R	HEADWATERS

STREAM NAME		WATER CODE	DOWNSTREAM POINT	UPSTREAM POINT
CLARKS FK YELLOWSTONE				
	SEC 01	22-1162	MOUTH	BRIDGER
	SEC 02	22-1176	BRIDGER	WYOMING BORDER
	SEC 03	22-1190	WYOMING BORDER	HEADWATERS
CROW CREEK	SEC 01	07-1000	MOUTH	LOWER CROW RESERVOIR
	SEC 02	07-1020	LOWER CROW RESERVOIR	HEADWATERS
CUT BANK CREEK	SEC 01	14-1080	MOUTH	CUT BANK
	SEC 02	14-1120	CUT BANK	GLACIER PARK
FLATHEAD RIVER	SEC 01	07-1540	MOUTH	FLATHEAD LAKE
	SEC 02	07-1560	FLATHEAD LAKE	S FK FLATHEAD R
GALLATIN RIVER	SEC 01	09-2090	MOUTH	E GALLATIN RIVER
	SEC 02	09-6878	E GALLATIN RIVER	SPANISH CREEK
	SEC 03	09-6916	SPANISH CREEK	HEADWATERS
HYALITE CREEK	SEC 01	09-2546	MOUTH	HYALITE RESERVOIR
	SEC 02	09-6802	HYALITE RESERVOIR	HYALITE LAKE
JUDITH RIVER	SEC 01	16-1800	MOUTH	PLUM CREEK
	SEC 02	16-1820	PLUM CREEK	HEADWATERS
LITTLE BIGHORN RIVER				
	SEC 01	22-3654	MOUTH	LODGE GRASS CREEK
	SEC 02	22-3668	LODGE GRASS CREEK	HEADWATERS
LITTLE BLACKFOOT R				
	SEC 01	06-3772	MOUTH	ELLISTON
	SEC 02	06-3591	ELLISTON	HEADWATERS

STREAM NAME		WATER CODE	DOWNSTREAM POINT	UPSTREAM POINT
MADISON RIVER	SEC 01	13-3400	MOUTH	ENNIS LAKE
	SEC 02	13-3440	ENNIS LAKE	HEBGEN DAM
	SEC 03	13-3520	HEBGEN LAKE	YELLOWSTONE PARK
MARIAS RIVER	SEC 01	14-3240	MOUTH	TIBER DAM
	SEC 02	14-3280	LAKE ELWELL	CUT BANK CREEK
MILK RIVER	SEC 01	15-2680	MOUTH	HINSDALE
	SEC 02	15-2720	HINSDALE	MALTA
	SEC 03	15-2760	MALTA	HAVRE
	SEC 04	15-2800	HAVRE	FRESNO DAM
	SEC 05	15-2840	FRESNO RESERVOIR	CANADA
	SEC 06	15-2880	CANADA	MIDDLE & SOUTH FORKS
MISSOURI RIVER	SEC 01	16-2420	N DAKOTA BORDER	MILK RIVER
	SEC 05	16-2500	MILK RIVER	FORT PECK DAM
	SEC 06A	16-2521	FT PECK RES	BLAIN/CHOUT CO LINE
	SEC 06B	16-2522	BLAIN/CHOUT CO LINE	MARIAS R
	SEC 07	17-4864	MARIAS RIVER	MORONY DAM
	SEC 08	17-4880	MORONY DAM	CASCADE BRIDGE
	SEC 09	17-4896	CASCADE BRIDGE	HOLTER DAM
	SEC 10	17-4913	HOLTER LAKE	HAUSER DAM
	SEC 11	17-4928	CANYON FERRY RES	TOSTON DAM
	SEC 12	17-4944	TOSTON DAM	HEADWATERS
MUSSELSHELL RIVER				
	SEC 01	18-4320	MOUTH	RT 3 BRIDGE NEAR LAVINA
	SEC 02	18-4350	RT 3 BRIDGE NEAR LAVINA	HEADWATERS
POPLAR RIVER	SEC 01	16-2820	MOUTH	E FK POPLAR RIVER
	SEC 02	16-2375	E FK POPLAR RIVER	CANADA
PRYOR CREEK	SEC 01	22-4802	MOUTH	PRYOR
	SEC 02	22-4816	PRYOR	HEADWATERS

STREAM NAME		WATER CODE	DOWNSTREAM POINT	UPSTREAM POINT
RED ROCK RIVER	SEC 01	01-6140	MOUTH	LIMA DAM
	SEC 02	01-6160	LIMA RESERVOIR	UPPER RED ROCK LK
ROCK CREEK	SEC 01	06-5263	MOUTH	HOGBACK CREEK
	SEC 02	06-5282	HOGBACK CREEK	HEADWATERS
ROCK CREEK	SEC 01	22-4928	MOUTH	W FK (CHROME CAMP)
	SEC 02	22-4956	W FK (CHROME CAMP)	HEADWATERS
RUBY RIVER	SEC 01	01-6360	MOUTH	RUBY RESERVOIR
	SEC 02	01-6380	RUBY RESERVOIR	HEADWATERS
SHIELDS RIVER	SEC 01	22-5334	MOUTH	CLYDE PARK
	SEC 02	22-5348	CLYDE PARK	WILSALL
	SEC 03	22-5362	WILSALL	HEADWATERS
SMITH RIVER	SEC 01	17-6816	MOUTH	HOUND CREEK
	SEC 02	17-6832	HOUND CREEK	CAMP BAKER
	SEC 03	17-6833	CAMP BAKER	HEADWATERS
STILLWATER R.	SEC 01	22-6104	MOUTH	NYE
	SEC 02	22-6118	W FK (NYE)	HEADWATERS
SUN RIVER	SEC 01	20-6050	MOUTH	MUDDY CREEK
	SEC 02	20-6100	MUDDY CREEK	GIBSON DAM
SWAN RIVER	SEC 01	07-4560	MOUTH	SWAN LAKE
	SEC 02	07-4580	SWAN LAKE	HEADWATERS
TETON RIVER	SEC 01	14-6000	MOUTH	CHOTEAU
	SEC 02	14-6040	CHOTEAU	HEADWATERS
THOMPSON RIVER	SEC 01	05-7248	MOUTH	BEND RANGER STATION
	SEC 02	05-7264	BEND RANGER STATION	HEADWATERS

STREAM NAME		WATER CODE	DOWNSTREAM POINT	UPSTREAM POINT
TONGUE RIVER	SEC 01	21-1150	MOUTH	BEAVER CREEK
	SEC 02	21-1200	BEAVER CREEK	TONGUE RIVER DAM
	SEC 03	21-1250	TONGUE RIVER RES	WYOMING BORDER
W FK STILLWATER R				
	SEC 01	22-6664	MOUTH	IRON CREEK
	SEC 02	22-6678	IRON CREEK	HEADWATERS
YAAK RIVER	SEC 01	11-7740	MOUTH	FALLS
	SEC 02	11-7760	FALLS	HEADWATERS
YELLOWSTONE R.	SEC 01	21-1350	N DAKOTA BORDER	POWDER RIVER
	SEC 02	21-1400	POWDER RIVER	BIGHORN RIVER
	SEC 03	22-7001	BIGHORN RIVER	HUNTLEY DIVERSION
	SEC 04	22-7015	HUNTLEY DIVERSION	CLARKS FORK R
	SEC 05	22-7028	CLARKS FORK R	STILLWATER R
	SEC 06	22-7043	STILLWATER R	BOULDER R
	SEC 07A	22-7057	BOULDER R	SPRINGDALE
	SEC 07B	22-7058	SPRINGDALE	SHIELDS R
	SEC 08A	22-7071	SHIELDS R	PINE CREEK
	SEC 08B	22-7072	PINE CREEK	TOM MINER CREEK
	SEC 09	22-7084	TOM MINER CREEK	GARDINER